



NEC3 Engineering & Construction Contract

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

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

for **Lethabo Power Station Replacement of all the Carbon
Online Grid (Cegrit Samplers).**

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CONTRACT No.

Part C1: Agreements & Contract Data

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C1.1 Form of Offer & Acceptance

Offer

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

Provision of Replacement of all the Carbon Online Grid (Cegrit Samplers) at Lethabo Power Station (Supply, installation, quality assurance, commissioning and handover associated to Carbon Online Grid).

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

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

Options A	The offered total of the Prices exclusive of VAT is	R [●]
	Sub total	R [●]
	Value Added Tax @ 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*.

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.

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		
8		

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.

	<i>For the tenderer:</i>	<i>For the Employer</i>
Signature	_____	_____
Name	_____	_____
Capacity	_____	_____
On behalf of	(Insert name and address of organisation)	Lethabo Power station Deneysville Vaal dam Road Vereeniging 1930
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
		X1: Price adjustment for inflation
		X2: Changes in the law
		X5: Sectional Completion
		X7: Delay damages
		X16: Retention
		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)	
	Address	Lethabo Power Station Deneyville Rd Viljoensdrift
	Tel	
	Fax	N/A
	e-mail	

10.1	The <i>Supervisor</i> is: (Name)	
	Address	Lethabo Power Station Deneysville Rd Viljoensdrift
	Tel No.	
	Fax No.	N/A
	e-mail	
11.2(13)	The <i>works</i> are	This project covers the replacement of all the carbon online grid (cegrit samplers) on the station. The configuration of the new fly-ash samplers consists of the base plate which connects the sampling probe and the reject pipe to the economiser ducting. This a compact system that consists mainly of the probe, the cyclone, the collecting jar, the reject line and the probe attached with a nozzle at the tip connected to a sampling tube. The scope of work related to carbon online grid project comprises mainly of: • Supply and delivery of the fly ash sampler system including the collecting jar, cyclone, sampling probe with a nozzle, the reject line and the sampling tubes. All the mentioned components should be supplied assembled on a base plate. • Cutting out an opening on the economiser outlet ducting roof for the mounting of the compact system. • Closing off the old reject line on the economiser outlet duct. • Modification of lagging and cladding. • Installation/mounting of the new cegrit sampler. The scope of the project also includes delivery to site, integration of quality assurance and off-loading of the system.
11.2(14)	The following matters will be included in the Risk Register	See Risk Management in part 3
11.2(15)	The <i>boundaries of the site</i> are	Lethabo Power Station
11.2(16)	The Site Information is in	Part 4: Site Information
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	24 hours during outages and emergencies, 3 working days for other requests during the normal operations in execution of the contract		
2	The <i>Contractor's</i> main responsibilities	Data required by this section of the core clauses is provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.		
3	Time			
11.2(3)	The <i>completion date</i> for the whole of the works is	Outage dependant (TBC)		
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	Condition to be met		key date
		1	Submission of Detailed Design and Approval	As per accepted program
		2	Complete Installation UNIT 1	As per accepted program and Outage Plan
		3	Complete Installation UNIT 2	As per accepted program and Outage Plan
		4	Complete Installation UNIT 3	As per accepted program and Outage Plan
		5	Complete Installation UNIT 4	As per accepted program and Outage Plan
		6	Complete Installation UNIT 5	As per accepted program and Outage Plan
		7	Complete Installation UNIT 6	As per accepted program and Outage Plan
30.1	The <i>access dates</i> are:	Part of the Site		Date
		1	Safety File approval	As per accepted program
		2	Safety Induction	

		3	Access to Plant area for works	As per accepted program As per accepted program
31.1	The Contractor is to submit a first programme for acceptance within	Two (2) weeks of the Contract Date.		
31.2	The starting date is	TBA		
32.2	The Contractor submits revised programmes at intervals no longer than	One week		
35.1	The Employer is not willing to take over the works before the Completion Date.	The Employer will take over the Works at the Section Completion of the works		
4	Testing and Defects			
42.2	The defects date is	52 weeks after Completion of the whole of the works.		
43.2	The defect correction period is	Defects affecting system availability must be resolved within 4 (four) hours. Latent defects and defects not impacting system availability must be resolved within 2 (two) weeks after notification		
	except that the defect correction period for	is two weeks		
	and the defect correction period for	is two weeks		
5	Payment			
50.1	The assessment interval is	The assessment interval will be between the 25th day of each successive month and based on the completed activities as per NEC option A guidelines.		
51.1	The currency of this contract is the	South African Rand.		
51.2	The period within which payments are made is	Thirty (30) Calendar days after the signed assessment by both Parties and a valid Tax Invoice. ATTENTION: Eskom's standard policy on payment term for all contracts valued above R50 000 0000 (Fifty Million Rand), including VAT, is 60 days. Bidders are requested to bear this payment term in mind when submitting bids and concluding contracts.		
51.4	The interest rate is	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.

6	Compensation events	All Compensation Events are to be managed as per core clause 6 of the NEC3 ECC
60.1(13)	The place where weather is to be recorded is:	Lethabo Power Station
	The <i>weather measurements</i> to be recorded for each calendar month are,	the cumulative rainfall (mm) the number of days with rainfall more than 10 mm 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 <i>weather measurements</i> are supplied by	South African Weather Services
	The weather data are the records of past weather measurements for each calendar month which were recorded at	Lethabo Power Station
	and which are available from:	the South African Weather Bureau and included in Annexure A to this Contract Data provided by the <i>Employer</i>
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> .
7	Title	To be managed as per core clause 7 of the NEC3 ECC
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. Natural disaster 2. Industrial action 3. . Community Unrest
9	Termination	To be managed as per core clause 9 of the NEC3 ECC
10	Data for main Option clause	

A	Priced contract with activity schedule	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.
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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 If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the ICE-SA
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	Johannesburg, 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

X1	Price adjustment for inflation			
X1.1(a)	The <i>base date</i> for indices is	One month prior to Tender closing date		
X1.1(c)	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
		0. [•]	Material	[•]
		0. [•]	Labour	[•]
		0. [•]	Transport	[•]
		15%	non-adjustable	Fixed
	Total	100%		
X2	Changes in the law	Becomes a Compensation Event only if the changes in the Law of the Republic of South Africa took place after the Contract Date.		

X5	Sectional Completion			
X5.1	The <i>completion date</i> for each <i>section</i> of the <i>works</i> is:	Section	Description	Completion date
		1	Completion of Design and approvals	As per accepted program
		2	Completion of Material Purchase and Delivery (Fabrication workshop)	As per accepted program
		3	Completion Manufacturing and FAT	As per accepted program
		4	Delivery and installation onsite	As per accepted program
		5	Completion of commissioning and SAT,	As per accepted program
		6	Training and Data Pack Submissions	As per accepted program
X5 & X7	Sectional Completion and delay damages used together	1	Completion of Design and approvals	As per accepted program
		2	Completion of Material Purchase and Delivery (Fabrication workshop)	As per accepted program
		3	Completion Manufacturing and FAT	As per accepted program
		4	Delivery and installation onsite	As per accepted program
		5	Completion of commissioning and SAT,	As per accepted program
		6	Training and Data Pack Submission	As per accepted program
				As per accepted program

		As per accepted program As per accepted program
X7.1 X5.1	Delay damages for late Completion of the sections of the works are:	2% per day of the Sectional Purchase Order Value
	The total delay damages payable by the <i>Contractor</i> does not exceed:	15% of the Sectional Purchase Order Value
X16	Retention	
X16.1	The <i>retention free amount</i> is	R0.00
	The <i>retention percentage</i> is	10% of every payment certificate
X18	Limitation of liability	
X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the insurance deductibles relevant to the event
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 the total of the Prices at the Contract Date and the 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 the applicable deductible as at contract date.
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 excluded matters is not limited. The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for Defects due to his design 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	(i) Seven (7) years after the <i>defects date</i> for latent Defects and

(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.

A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.

Z	The Additional conditions of contract are	Z1 to Z17 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 Manager</i> within two weeks of the Contract Date of the key person who has the authority to bind the <i>Contractor</i> on their behalf.	
Z2.3	The <i>Contractor</i> does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the <i>Employer</i> having been given to the <i>Contractor</i> in writing.	
Z3	Change of Broad Based Black Economic Empowerment (B-BBEE) status	
Z3.1	Where a change in the <i>Contractor's</i> legal status, ownership or any other change to his business composition or business dealings results in a change to the <i>Contractor's</i> B-BBEE status, the <i>Contractor</i> notifies the <i>Employer</i> within seven days of the change.	
Z3.2	The <i>Contractor</i> is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the <i>Project Manager</i> within thirty days of the notification or as otherwise instructed by the <i>Project Manager</i> .	

- 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 Confidentiality

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

Z5 Waiver and estoppel: Add to core clause 12.3:

- Z5.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *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.

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

- Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *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.

- Z6.2 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.

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

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

Z8 Notifying compensation events

- Z8.1 Delete from the last sentence in core clause 61.3, "unless the *Project Manager* should have notified the event to the *Contractor* but did not".

Z9 Employer's limitation of liability

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer's* liability under the indemnity is limited.

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

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

Z11 Addition to secondary Option X7 Delay damages (if applicable in this contract)

- Z11.1 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.

Z12 Ethics

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

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

- Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.
- Z12.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.
- Z12.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.
- Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover	84	
	84.1	When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.
	84.2	The <i>Contractor</i> provides the insurances stated in the Insurance Table A.

- 84.3** The insurances provide cover for events which are at the *Contractor's* risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage to the <i>works</i> , Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the <i>works</i> , Plant and 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	<u>Loss of or damage to property</u> <u>Employer's property</u> The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance <u>Other property</u> The replacement cost <u>Bodily injury to or death of a person</u> The amount required by applicable law
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z 13.2

Replace core clause 87 with the following:

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

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum limit of indemnity
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

- Z14.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.
- Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.
- Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.
- Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

- AAIA** means approved asbestos inspection authority.
- ACM** means asbestos containing materials.
- AL** means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
- Ambient Air** means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
- Compliance Monitoring** means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
- OEL** means occupational exposure limit.
- Parallel Measurements** means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
- Safe Levels** means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

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

SANAS means the South African National Accreditation System.

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

Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z15.3 The *Employer* manages asbestos and ACM according to the Standard.

Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z15.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.

Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

Z16 Security Clearance/ Criminal Checks

These clauses are not only, but are especially, applicable for accessing critical infrastructure in terms of the Critical Infrastructure Protection Act, 2019 (previously referred to as National Key Points), but may include other sites, and/or where persons are rendering a service or have given notice of intention to render a service to an organ of state, which service may (1) give him or her

access to classified information and intelligence in the possession of the organ of state; or (2) give him or her access to or information concerning areas designated as critical infrastructure.

- Z16.1 The *Contractor* and its subcontractors implement risk and security management processes and measures to mitigate any threats against any premises, installations or sites, systems, or information of the *Employer* with only persons with criminal verification record security clearance certificates being given access after verification of these and identifying documents by the *Employer's* security system.
- Z16.2 The *Contractor* provides, at the *Contractor's* cost, to the *Employer*, criminal verification record security clearance certificates for each person the *Contractor* or its subcontractors requires to access any premises, installations or sites, systems, or information of the *Employer*, with copies of their identifying documents, such as passports, before allowed such access by the *Employer*. The *Employer's* refusal to allow access to premises, installations or site/s, systems or information is at the *Employer's* sole discretion and is not a compensation event.
- Z16.3 The criminal verification record security clearance certificates provided are to have been issued by a service provider which is to be a reputable screening company accredited by the South African Police Services, are to be no older than four weeks since issue and valid for as long as each person is required to access premises, installations or sites, systems or information. The *Employer* may require updated certificates and identifying documents every 26 to 52 weeks, subject to safety and security concerns and the risk rating of the works or services undertaken and/or premises, installations or sites, systems or information.
- Z16.4 If any such criminal verification record security clearance certificates is cancelled, withdrawn, invalidated, amended, or expires, or a criminal conviction is noted against any person requiring access, even if an appeal against the criminal conviction has been noted, the *Service Manager* may instruct the *Contractor* to ensure that such person leaves the premises, installations or site/s and is blocked from systems and information and the giving of this instruction is not a compensation event.

Z17 Protection of Personal Information Act Compliance

- Z17.1 For the purposes of this clause, the terms "Data Subject", "Personal Information", "Processing" and "Regulator" and "Responsible Party" have the meanings given to them in the Protection of Personal Information Act, 2013 ("POPIA").
- Z17.2 Each Party acknowledges that it is an independent Responsible Party in relation to the Personal Information processed in terms of this contract ("Shared Personal Information") and that it determines the purposes for which and the manner in which the Shared Personal Information is, or is to be, processed.
- Z17.3 Each Party shall always comply with POPIA when performing its obligations under this contract and shall not perform any of their respective obligations under this contract in such a way as to cause the other Party to breach any of that other Party's obligations under POPIA.
- Z17.4 Each Party shall ensure that, in respect of all Shared Personal Information provided to the other Party and in respect of the use of that Shared Personal Information under this contract:-
- Z17.4.1 all necessary fair Processing notices have been provided to and consents obtained from Data Subjects by that Party, where required, in terms of POPIA, including to specify that the other Party is also a Responsible Party in respect of the Data Subject's Personal Information and to provide a link (for example, <https://www.eskom.co.za/about-eskom/website-terms-and-conditions/>) to the other Party's Privacy Statement or to include a statement that the other Party's Privacy Statement can be found on the other Party's corporate website; and

- Z17.4.2 all necessary steps have been taken to ensure that Shared Personal Information has been collected and processed in accordance with the principles set out in POPIA, including in particular those relating to:
- lawful, fair and transparent Processing;
 - specified, legitimate and explicit purposes of Processing; and
 - adequate, relevant and not excessive Processing.
- Z17.5 If either Party receives any complaint, notice or communication from the Regulator which relates directly to:
- Z17.5.1 the other Party's Processing of the Shared Personal Data; or
- Z17.5.2 a potential failure by the other Party to comply with POPIA in respect of the activities of the Parties under or in connection with this contract,
- it shall, to the extent permitted by law, promptly notify the other Party and provide such information as it shall reasonably request in that regard.
- Z17.6 If a Data Subject makes a written request to either Party to exercise any of their rights under POPIA, the receiving Party shall respond to that request in accordance with POPIA. To the extent the request concerns Processing of Shared Personal Information undertaken by the other Party, the receiving Party shall:
- Z17.6.1 promptly and without undue delay forward the request to the other Party; and
- Z17.6.2 cooperate and provide reasonable assistance in relation to that request to enable the other Party to respond in accordance with POPIA.
- Z17.7 Each Party acknowledges that the other Party may disclose Shared Personal Information to any Regulator or law enforcement authority with jurisdiction to request access to the Shared Personal Information.
- Z17.8 Neither Party discloses or otherwise makes available the Personal Information to any third party (including sub-contractors, but excluding its authorised employees who require access to such Personal Information strictly in order for the Parties to carry out their obligations pursuant to this contract), unless a Party has provided, to a requesting Party, its prior written consent to do so, and the requesting Party has submitted to the other Party (consenting Party), to its satisfaction, a copy of a written contract or undertaking that the requesting Party has entered into with a third party for the protection of Personal Information of the Data Subjects or unless there is an applicable exemption in terms of the law to process or further process the personal information.
- Z17.9 The requesting Party indemnifies and holds harmless the consenting Party and its staff, successors, cessionaries, delegates, and assigns, from any and all losses, costs, expenses and damage, as well as penalties and fines arising from the requesting Party's non-compliance with the provision of any relevant legislation applicable to Personal Information or data protection, as well as damage to the consenting Party's reputation and costs of compliance as directed by the Regulator, including but not limited to publication of the data breach.

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	Number of days with wind > 5.5 m/s	Total weather allowance 40% overlap
January	113.4	3.6	0.0	0	2.2	3.5
February	80.5	2.8	0.0	0	0.6	2.1
March	37.0	0.8	0.0	0	1.1	1.1
April	56.2	1.9	0.2	0	0.9	1.8
May	9.8	0.2	3.2	0	1.1	2.7
June	7.3	0.3	14.7	0	1.6	9.9
July	0.8	0	14.6	0	2.0	9.9
August	4.8	0	4.8	0	3.6	5.0
September	23.3	0.8	0.4	0	4.7	3.6
October	63.4	2.4	0.0	0	5.3	4.6
November	82.0	2.7	0.0	0	5.6	5.0
December	139.3	4.7	0.0	0	2.8	4.5

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

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Notes to a tendering contractor:

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.

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

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

		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	TBC		
11.2(14)	The following matters will be included in the Risk Register	Site access restrictions or shutdowns (operational plant interface)		
31.1	The programme identified in the Contract Data is	To be accepted by the Project manager		
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	<i>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).</i>		
A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		

41 in SSCC	The percentage for people overheads is:	%		
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	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

Part 2: Pricing Data
ECC3 Option A
1.

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;

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.

LETHABO POWER STATION REPLACEMENT OF ALL THE CARBON ONLINE GRID (CEGRIT SAMPLERS).

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.

C2.2 the *activity schedule*

Use this page as a cover page to the *Contractor's activity schedule*.

LETHABO POWER STATION REPLACEMENT OF ALL THE CARBON ONLINE GRID (CEGRIT SAMPLERS).

The scope of work related to carbon online grid project comprises mainly of:

Item	Description	Unit	Rate	Amount
1	Preliminaries & Generals	Sum		
1.1	Site Establishment	Sum		
1.2	Site De-establishment	Sum		
1.3	Safety File	Sum		
2	Design			
	The cegrit sampler is a compact system assembled on a 3 mm base plate, the system consists mainly of a 2.5 m sampling probe connected to a brass cyclone by a sampling tube/pipe, the collecting jar and the reject line. The sampling probe is fitted with a 12 mm nozzle at the tip. The sampling probe is isokinetic type for accurate and representative samples. The sampling pipe and the reject line designed without 90 degrees bends on the system. The sampler should collect at least half a 1 Litre collecting jar in a period of 24 hours. The sampling probe should be made from a heat-resistant and anticorrosive material. The probe lies in a flue gas ducting operating at high temperatures (around 300°C). The container should be able to withstand high temperatures and abrasive particles, equipped with a sealing mechanism to prevent leakage. Have an insulated sampling tube/pipework to ensure the fly ash is collected under consistent conditions and operating with little to no blockages. Note: The system should be easy to maintain. <i>Have adjustable flow rates to maintain accurate sampling under varying operational conditions.</i> <i>Maintain sealing on the mounting face, that is, the design should ensure proper sealing between the base plate and the economiser ducting.</i>	Sum		

LETHABO POWER STATION REPLACEMENT OF ALL THE CARBON ONLINE GRID (CEGRIT SAMPLERS).

	Development and standardisation of the Employer's design into a detailed design for all Works covering fly ash sampler system.			
3	Removal and decommissioning of the old sampling system Overview of the existing system :Cyclone type, sampling on economiser outlet flue gas duct made from brass and having ejector outlet diameter including thread: 44.20 mm; ejector outlet depth: 17.51 mm; mounting bolt slots diameter on ejector outlet face: 4.83 mm drilled through the top part of the cyclone 43.15 mm apart; inlet diameter: 15.38 mm; cyclone body diameter od: 53.86 mm; cyclone body cone bottom diameter od: 31.65 mm & id: 16.13 mm; bottom outlet base diameter od to which sampling jar is attached: 103.85 mm & id: 89.60 mm; bottom outlet base depth to which sampling jar is attached: 18.93 mm; seal slot diameter on side of bottom outlet base to secure jar cage or strap: 4.89 mm; slots depth on bottom outlet base: 9.54 mm note two bolt slots protrude by 7.83 mm from the side of bottom outlet base.			
3.1	Unit 1(Two (2) per Unit)	Sum		
3.2	Unit 2(Two (2) per Unit)	Sum		
3.3	Unit 3(Two (2) per Unit)	Sum		
3.4	Unit 4(Two (2) per Unit)	Sum		
3.5	Unit 5(Two (2) per Unit)	Sum		
3.6	Unit 6(Two (2) per Unit)	Sum		

LETHABO POWER STATION REPLACEMENT OF ALL THE CARBON ONLINE GRID (CEGRIT SAMPLERS).

4	Installation of the new sampling system Supply, delivery and Installation of the fly ash sampler system including the collecting jar, cyclone, the probe with a nozzle, reject line and the sampling tubes. All the mentioned components should be supplied assembled. Cutting out an opening on the economiser outlet ducting roof for the mounting of the compact system. Including closing the old reject line on the economiser outlet duct. <i>Note: This activity covers the entire supply, delivery and Installation complete with all necessary accessories: -</i>			
4.1	Unit 1(Two (2) per Unit)	Sum		
4.2	Unit 2(Two (2) per Unit)	Sum		
4.3	Unit 3(Two (2) per Unit)	Sum		
4.4	Unit 4(Two (2) per Unit)	Sum		
4.5	Unit 5(Two (2) per Unit)	Sum		
4.6	Unit 6(Two (2) per Unit)	Sum		
5	Labelling (Configuration Management) Supply & Install labels for all equipment (AKZ Codes)			
5.1	Unit 1(Two (2) per Unit)	Sum		
5.2	Unit 2(Two (2) per Unit)	Sum		
5.3	Unit 3(Two (2) per Unit)	Sum		
5.4	Unit 4(Two (2) per Unit)	Sum		
5.5	Unit 5(Two (2) per Unit)	Sum		
5.6	Unit 6(Two (2) per Unit)	Sum		
6	Testing and Commissioning	Each		
6.1	Unit 1(Two (2) per Unit)	Sum		
6.2	Unit 2(Two (2) per Unit)	Sum		
6.3	Unit 3(Two (2) per Unit)	Sum		
6.4	Unit 4(Two (2) per Unit)	Sum		
6.5	Unit 5(Two (2) per Unit)	Sum		
6.6	Unit 6(Two (2) per Unit)	Sum		

LETHABO POWER STATION REPLACEMENT OF ALL THE CARBON ONLINE GRID (CEGRIT SAMPLERS).

7	Training of Operators Provide training to Eskom personnel on the new system			
7.1	Unit 1(Two (2) per Unit)	Sum		
7.2	Unit 2(Two (2) per Unit)	Sum		
7.3	Unit 3(Two (2) per Unit)	Sum		
7.4	Unit 4(Two (2) per Unit)	Sum		
7.5	Unit 5(Two (2) per Unit)	Sum		
7.6	Unit 6(Two (2) per Unit)	Sum		
8	Data Books Submissions Which shall include: Welding procedure specifications & Welder qualifications, QCP's, ITP's, Fabrication drawings, Dye penetrant Non-destructive test results on all welds & Weld test certificates, Steel grade certificates, Bolt grade certificates, Seal specification sheet, As-built data and drawings of the completed works upon handover, As-built drawings are submitted in PDF and native CAD/DGN format including recommended Maintenance strategy.			
8.1	Unit 1	Sum		
8.2	Unit 2	Sum		
8.3	Unit 3	Sum		
8.4	Unit 4	Sum		
8.5	Unit 5	Sum		
8.6	Unit 6	Sum		
9	Supply and delivery of Two (2) Sampling System Spares	Sum		
	Total (Excl VAT)			

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
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C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	

C3.1: EMPLOYER'S WORKS INFORMATION

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1. Description of the works

1.1 Executive overview

The Carbon On-line Grid is a cyclone sampling system that is used to extract fly-ash at the economiser outlet flue gas ducts, for carbon in refuse (unburned coal) analysis. Fly ash sampling is a requirement for CO₂ emissions which is included in Eskom's Integrated Report and is used to compile an annual compliance greenhouse (GHG) emissions report submitted to the Department of Fisheries Forestry and Environment (DFFE). The reliability and availability of this sampler is a compliance requirement for the station.

The scope of work comprises of a detailed design, supply, removal, installation, testing, and commissioning support associated with the replacement of the existing carbon online grid (Cegrit) fly ash sampler systems installed on the economiser outlet ducting of the station generating units. The project is for replacement of twelve (12) existing fly ash samplers, installed on the left-hand and right-hand side economiser outlet ducting, with a compact fly ash sampler design. Work areas will involve elevated platforms, restricted access areas, and interfaces with live plant systems, requiring strict adherence to the Employer's safety, permit-to-work, isolation, and outage management procedures.

Due to the operational nature of the power station, the Contractor must have demonstrable experience in executing mechanical modification projects within heavy industrial or power generation environments, including work on boiler ducting systems and elevated plant areas.

1.2 Employer's objectives and purpose of the works

Fly ash sampling is a requirement for CO₂ emissions and safe operation of the boiler. The purpose of this project is to replace of all the carbon online grids (cegrit samplers) of the station, that is, 12 fly ash samplers as installed on the left-hand and right-hand side economiser outlet ducting (2 per unit).

The Employer's objective is to replace the existing carbon online grid (Cegrit) fly ash sampler systems installed on the economiser outlet ducting with new compact fly ash sampler assemblies that are reliable, maintainable, and suitable for continued operation under the station's operating conditions.

The purpose of the Works is to provide a fully functional fly ash sampling system capable of safely and effectively extracting representative fly ash samples from the economiser outlet ducting.

The scope of work comprises mainly of:

1. Detailed design of the fly ash sampler system assembly.
2. Supply and delivery of the fly ash sampler system components, that is the collecting jar, cyclone separator, the sampling probe fitted with the nozzle, and the reject line pipe with the cone. All the mentioned components should be supplied assembled on a base plate with all fittings according to detailed design to be approved.
3. Design and installation of a flange opening on the economiser outlet ducting roof for the mounting of the system assembly.
4. Decommissioning; Removing and sealing-off the old system on the economiser outlet duct.
5. Installation of the new fly ash sampler as per design, a fully assembled system on a base plate.

The commissioning of the new system entails a test and optimising report of the newly installed system, at handover the system must have worked without blockages consistently for a period of 6 months.

The Works shall be fit for their intended purpose, namely:

- Continuous operation within the environmental and operating conditions applicable to the economiser outlet ducting;
- Safe, reliable and consistent (continuous) collection of representative fly ash samples within a 24 hour interval;
- Mechanical integrity under normal operating conditions of the generating units;
- Accessibility for routine inspection, maintenance, cleaning, and component replacement;
- Compatibility with the existing plant configuration and operating environment.

The Contractor shall ensure that the design, materials, fabrication, installation, and workmanship collectively achieve the intended operational purpose of the Works and comply with all applicable technical, safety, and quality requirements specified in the Contract.

1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction.
CO2	Carbon Dioxide.
OBL	Outside battery limits.

2. Management and start up.

2.1 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Weekly on _____ at _____		
Overall contract progress and feedback	Monthly on _____ at _____		<i>Employer, Contractor, Supervisor, and _____</i>

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

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

2.2 Documentation control

- (1) All documents supplied by the Contractor are subject to the Employer's acceptance. Documents such as detail design report, QCP's, method statements and other documents impacting the Works must be accepted by the Employer at least 14 working days prior to commencement of the Works.
- (2) Each revision of a document or drawing is accompanied with a list of the comments made by the Employer on the previous revision if applicable and the response/corrective action taken by the Contractor. Changes will be recorded in a revision table contained on/in each drawing/document.

- (3) Documents and drawings indicate the Employer's reference number as allocated by the Employer. The Contractor may have their own document or drawing number on the document or drawing the document or drawing, but where reference is made among documents or drawings, the Employer's number is used.
- (4) The Contractor compiles a complete data book for all Works done containing the following as per VDSS:
- a) Scope of work.
 - b) Detail design report.
 - c) Approved QCP's
 - d) Inspection reports and procedure
 - e) As built drawings.
 - f) Material summary that gives full traceability between components used, assembly drawings, material certificates and complete ordering information.
 - g) Maintenance, operating and troubleshooting documentation of all new plant equipment installed (as a minimum)

2.3 Health and safety risk management

- Ensure what is listed on the file shall be implemented during project execution
- Hazard Identification and Risk Assessments submitted to the Client must be in alignment with the Risk Assessment issued by the Client during the tendering phase.
- Contractor shall ensure that a full-time Safety Practitioner registered with the statutory body approved by DoEL is appointed on full time basis.
- PPE and Vehicle inspections must be conducted on daily basis and records must be kept.
- Contractor to be familiarized with Eskom's Health & safety policy.
- Eskom project manager to also ensure that all required permits are issued to the contractor's authorized supervisor on daily basis. (Both the contractor and Eskom)
- The contractor's personnel shall undergo PSR training to be qualified as Authorized supervisor to carry out the works under the permit.
- The contractor shall be expected to conduct task risk assessments and pre-job briefs every time before performing work.
- The contractor must ensure that they align themselves with the requirements of PTW wherever it is issued.
- Strict adherence to the PPE requirement by the contractor
- Adherence to vehicle maintenance plans and daily/pre-trip inspections
- Strict adherence to travelling task risk assessment

2.4 Environmental constraints and management

- Contractor to be familiarized with Eskom SHEQ Policy
- SHE File to be approved by the Environmental Department.
- Contractor shall submit an Aspect and Impact Register that complies with the ISO 14001 standard especially that the contractor will be working with ash analysis, it's imperative to understand the impacts.
- Contractor shall familiarise him/herself with the Environmental procedures related to the activity.
- Self-audits during work execution will be conducted weekly whereby environmental risks are identified.
- Contractor shall report all incidents or risks whilst on the job to the Eskom Project leader who will inform the environmental department.
- Contractor shall comply to the following environmental procedures: LBE22005 Environmental spill management procedure LBE22004 Environmental waste management procedure Reasonable care

should be taken to prevent environmental degradation

2.5 Quality assurance requirements

1. The Contractor submits a fully detailed Quality Control Plan (QCP) for acceptance, which details all the aspects of the quality management system to be applied. It includes the methods that will be utilized to ensure quality assurance, control and improvement of the identified activities as stated in the Scope of Works.
2. The Contractor is responsible for defining the level of QA/QC (Intervention Points) or inspection to be imposed on his suppliers of material in the Quality Control Plans (QCPs). This level is based on the criticality of equipment and must be submitted to the Project Manager for acceptance.
3. Product data sheets, product samples, and any other documents are submitted for review and acceptance by the Project Manager after contract award and prior to the commencement of work.
4. All quality control documentation is submitted to the Project Manager within seven (7) days of Contract date.

2.6 Programming constraints

Construction methods must be of such a nature that no person, property or improvements in the vicinity of the works is endangered. The Employer accepts no responsibility for any works executed without written permission outside the site of works.

(1) The Contractor shall submit the first programme to the Project Manager for acceptance within the period stated in the Contract Data and it must be updated as per the intervals prescribed in the Contract Data.

(2) The Accepted Programme at the Contract Date serves as a baseline for the execution of the works until the latter of the defects date or the end of the defects correction period. This baseline shown on all subsequent graphical presentations of revised programmes.

(3) The Contractor adheres to the following programming constraints:

- The Contractor shall submit a program, compiled in Microsoft Project/Primavera or similar program, which will provide details of the list of activities and the duration of each activity. The program should be no longer than 3 years, The Acceptance of Design shall be limited to 3 months and the Duration for execution shall be a Maximum of 33 months from the day access is granted on the plant
- A list of activities and duration of each shall be made available after an instruction to commence work is supplied to the Contractor by the Employer's Representative.
- The program shall be updated weekly and will be used to manage all installation activities.

(4) The Contractor submits a bar chart program two weeks after award of the contract showing the following:

- The early start and early completion date of each activity.
- The late start and late completion of each activity Planned completion.
- The order and planning of operations which the Contractor plans to do in order to provide the works.
- The Contractor prepares and submits an update, seven days after the start date, showing actual progress and the effect upon the remainder of the activities to be completed.

(5) The Contractor submits, together with the progress reports, a written report which contains the following:

- Statement and report on those sections of the works where delay against programme has occurred (if any), together with the reasons why delay has occurred and a plan denoting the action to be taken and the period of time necessary to recover such delay.
- Statement and report on those sections of the works that are currently ahead of programme (If any).
- The impact of any programming changes arising is reflected in revised forecast rate of invoicing schedules and resource schedules.

Monthly Progress Report (for Payment)

The contents of the report may vary from month to month depending upon the phase of the project and/or the items of management focus. However, the basic framework of the report consists of the following:

1. Executive summary (narrative identifying major movement within the reporting period).
2. Pictures of works done for the month before and after
3. Detailed description of the work done to date
4. Attach Surveys done if applicable for the reporting month
5. Revised Programme indicating, actual progress of work against last Accepted Programme.
6. A one-month look ahead work window.
7. Activities in progress during as well as completed during current reporting period per discipline, including the activities of the Employer and Others.
8. Activities to undertaken during next reporting period per discipline, including the activities of the Employer and Others.
9. Status overview by unit, by plant area, by phase.
10. Key issues / Items of concern and corrective actions. (Challenges encountered and recommended solution or request for resolution)
 - Early warning log.
 - Compensation event log.
 - Critical activities report.
 - Attach Forecast rate of payment schedule updated with actual progress.
 - Statement and report on work ahead and behind progress.
 - Attach Signed QCP's for the completed activities being claimed
 - Attach Time sheets for time related items and travel log for transport claims
 - Attach Delivery Notes for material being purchase and delivered (Eskom Project Manager, Engineer and/or QC to inspect Material being delivered)
 - Attach Daily Dairies for the month

2.7 Contractor's management, supervision and key people

- (1) The Contractor is to provide a detailed organogram at tender. The organogram must clearly indicate the employee's details. In the event of any person within the Contractor's organogram changing, the Contractor is to obtain approval for the replacement from the Project Manager.
- (2) The Contractor shall provide his own Responsible person as required by the Permit to Work system on site during the duration of the works.

2.8 Invoicing and payment

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 showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

The *Contractor* shall address the tax invoice to Eskom Holdings SOC Ltd and include on each invoice the following information:

Name and address of the *Contractor* and the *Project Manager*;
The contract number and title;
Contractor's VAT registration number;
The *Employer's* VAT registration number 4740101508;
Description of service provided for each item invoiced based on the Price List;
Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
(add other as required)

Add procedures for invoice submission and payment (e. g. electronic payment instructions)

2.9 Insurance provided by the Employer

As per insurance deductibles

2.10 Contract change management

- (1) The change management process for addressing changes on the contract will be as follows.

- (1.1) All requests for contract changes shall be submitted in writing by the Contractor to the Project Manager as per the terms and condition of the contract.
- (1.2) The Project Manager will follow the prescribed requirements for managing contract changes as per his/her delegation of authority.
- (1.3) The Contractor shall ensure that all changes accepted by the Project Manager are documented and kept as record.

2.11 Provision of bonds and guarantees

The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer's* right to termination stated in this contract.

2.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the Contractor

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

2.13 Training workshops and technology transfer

The Contractor shall provide structured on-the-job training and technology transfer to the Employer's designated operational, maintenance, and technical personnel as part of the Works. The objective is to ensure that the Employer is fully capable of safely operating, inspecting, maintaining, and troubleshooting the installed fly ash sampler systems after Completion.

On-the-Job Training

In addition to formal workshops, the Contractor shall provide continuous on-the-job training during installation and commissioning activities. This shall include direct supervision and instruction of Employer personnel during:

- Installation of new sampler assemblies.
- Setting up of sampling probes and nozzles.
- Inspection and cleaning procedures.
- Functional checks and operational verification.

Technology Transfer

The Contractor shall provide full technology transfer as part of the contract deliverables upon Completion of the Works. This shall include transfer of all relevant technical knowledge required for the Employer to independently operate and maintain the installed systems.

Technology transfer shall include, but not be limited to:

- Detailed explanation of system design intent and operational philosophy.
- As-built drawings and design documentation.
- Maintenance strategies and recommended inspection intervals.
- Component identification and replacement procedures.
- Recommended spare parts lists and sourcing information.
- Failure mode identification and corrective maintenance techniques.

The Contractor shall ensure that all key operational and maintenance knowledge is adequately transferred to the Employer's personnel before final handover.

3. Engineering and the *Contractor's* design

The Contractor's design verifies and ensures the integrity of all pipe work and the base plate. The materials of construction for the pipework is suitable for the water and environment it is in contact with.

1. The Contractor takes full professional accountability and liability for the works as described in the works information.
2. The Contractor adheres to all design requirements, codes of standards and regulations stated in this works information.
3. Any discrepancy or ambiguity between the Employer's Specifications or requirements is to be immediately brought to the attention of the Project Manager for clarification.
4. Where the Contractor requires additional information to design or install certain components of the Plant, the Contractor notifies the Project Manager of the Contractor's requirements a minimum of one (1) week before continuing with the works.
5. All documentation, as specified in this works information, forms part of the works and is supplied to the Project Manager by the Contractor. The Employer reserves the right to issue the Contractor's design or drawings to other Contractors for purposes of maintenance, spares, verifications, modifications in future or any other purposes required by the Employer. The Employer has total rights to use the design as the Employer requires. The Contractor notes that all drawings and other documentation supplied to the Employer become the property of the Employer upon completion of the works

3.1 *Employer's* design

Existing system :Cyclone type, sampling on the economiser outlet flue gas duct made from brass and having ejector outlet diameter including thread: 44.20 mm; ejector outlet depth: 17.51 mm; mounting bolt slots diameter on ejector outlet face: 4.83 mm drilled through the top part of the cyclone 43.15 mm apart; inlet diameter: 15.38 mm; cyclone body diameter od: 53.86 mm; cyclone body cone bottom diameter od: 31.65 mm & id: 16.13 mm; bottom outlet base diameter od to which sampling jar is attached: 103.85 mm & id: 89.60 mm; bottom outlet base depth to which sampling jar is attached: 18.93 mm; seal slot diameter on side of bottom outlet base to secure jar cage or strap: 4.89 mm; slots depth on bottom outlet base: 9.54 mm note two bolt slots protrude by 7.83 mm from the side of bottom outlet base. System prone to blockages.

The Employer's design intent has been developed to ensure that the installed fly ash sampling system provides reliable, representative sampling of fly ash from the economiser outlet ducting under normal and transient operating conditions of the generating units.

The Employer has not provided a fully detailed fabrication design for the sampler assemblies. The Contractor shall therefore be responsible for completing the detailed design necessary to ensure that the Employer's functional and performance requirements are fully achieved. This includes, but is not limited to:

- Detailed arrangement and integration design of the sampler assemblies;
- Design of base plates, flanges, and mounting arrangements to suit existing ducting;
- Finalisation of nozzle sizing and probe arrangement to achieve isokinetic sampling conditions;
- Detailing of reject line routing and discharge arrangements;
- Design of duct penetrations and sealing arrangements;
- Ensuring structural adequacy of all installed components under operational conditions.

The Contractor shall ensure that all detailed design work is fully compliant with the Employer's performance requirements, applicable standards, and good engineering practice, and that it is suitable for installation within an operational power station environment.

All Contractor-developed design elements shall be subject to review and acceptance by the Employer or Project Manager prior to manufacture and installation.

3.2 Parts of the *works* which the *Contractor* is to design

In accordance with Core Clause 21.1, the Contractor shall be responsible for the detailed design of specific elements of the Works required to achieve full compliance with the Employer's performance and functional

requirements. Even where the Works are predominantly based on Employer-provided design intent, the Contractor shall undertake all necessary detailed design, integration design, and temporary works design required for safe and compliant execution of the Works.

The Contractor's design responsibility shall include, but not be limited to, the following:

(a) Detailed Design of Fly Ash Sampler Assemblies

The Contractor shall complete the full detailed engineering design of the fly ash sampler systems, including:

- Final configuration and integration of cyclone separator, collecting jar, isokinetic sampling probe, nozzle, and reject pipe;
- Dimensional detailing and fabrication drawings for all components;
- Interface detailing between sampler assemblies and economiser outlet ducting;
- Ensuring isokinetic sampling performance is achieved under operating conditions;
- Material selection suitable for high temperature, abrasive fly ash environment.

(b) Duct Penetrations and Flange Arrangements

The Contractor shall design all modifications to existing economiser outlet ducting required to accommodate the new sampler systems, including:

- Design of flange openings and reinforcement arrangements on duct roof sections;
- Structural detailing to ensure duct integrity is maintained after modification;
- Sealing arrangements to prevent leakage of flue gas and ash;
- Coordination of penetration locations with existing internal duct conditions and flow characteristics.

(c) Mounting, Support, and Structural Interface Design

The Contractor shall design all mounting arrangements required to secure the sampler assemblies to the existing ducting, including:

- Base plate design and load distribution arrangements;
- Structural steel supports or brackets where required;
- Fastening, anchoring, and vibration control measures;
- Corrosion protection and thermal expansion considerations.

(d) Reject Line and Drainage Arrangement Design

The Contractor shall design the reject line pipework and discharge arrangements, including:

- Routing and support of reject lines from cyclone separators;
- Design of discharge points to ensure safe and controlled disposal of rejected material;
- Prevention of blockages and accumulation of fly ash;
- Compatibility with existing plant layout and access constraints.

(e) Temporary Works Design

The Contractor shall be fully responsible for all temporary works required for execution of the Works, including:

- Requesting of scaffolding, access platforms, and working-at-height systems;
- Lifting and rigging arrangements for installation and removal of equipment;
- Temporary isolation covers, sealing arrangements, and duct blanking during installation;
- Temporary supports for existing plant where required during modification works.

(f) Installation and Method-Related Design Inputs

The Contractor shall provide method-related design inputs necessary to support safe construction, including:

- Installation sequencing and erection methodology considerations;
- Installation tolerances and alignment requirements;
- Interface management between new and existing plant components.

(g) As-Built and Final Design Documentation

Upon completion of the Works, the Contractor shall update all design documentation to reflect the installed condition and submit full as-built records, including drawings, specifications, and relevant calculations.

All Contractor design submissions shall be subject to review and acceptance by the Project Manager prior to manufacture, fabrication, or installation. The Contractor remains fully responsible for the adequacy, fitness for purpose, and constructability of all designs undertaken under this clause.

3.3 Procedure for submission and acceptance of Contractor's design

The Contractor's design submission shall include, but not be limited to, the following particulars:

- General arrangement drawings of the complete fly ash sampler assembly.
- Inspection and test requirements.
- Any applicable calculations or technical data supporting the adequacy and suitability of the design.
- Detailed fabrication and installation drawings for:
 - Base plate arrangement.
 - Cyclone separator assembly.
 - Collecting jar arrangement.
 - Isokinetic sampling probe and specified nozzle.
 - Reject pipe and cone arrangement.
 - Flange opening and mounting arrangement on the economiser outlet duct roof.
 - Dimensional details and interface requirements with existing economiser outlet ducting.
 - Material specifications for all supplied components.
 - Welding details and procedures applicable to duct modifications and mounting arrangements.
 - Assembly and installation methodology.
 - Sealing arrangements for decommissioning and sealing-off of the existing sampler system.
 - Quality control documentation applicable to fabrication and installation.

All drawings shall:

- Be clear, fully detailed, and issued with unique drawing numbers and revision status.
- Indicate all dimensions, materials, weld details, and mounting requirements.
- Be submitted in both PDF and editable electronic format.
- Comply with the Employer's drawing and document control requirements.

The Contractor shall submit the design documentation to the Project Manager within the period stated in the Accepted Programme. Work associated with manufacture, fabrication, or installation shall not proceed until the Project Manager has issued acceptance of the design submission.

Acceptance by the Project Manager does not relieve the Contractor of responsibility for the adequacy, correctness, safety, operability, or performance of the design

3.4 Other requirements of the Contractor's design

The Contractor's design shall take into account the existing plant configuration, operating conditions, and space limitations on the economiser outlet ducting area.

The design shall ensure:

- Compatibility with the existing economiser outlet ducting and surrounding plant equipment.
- Safe access for installation, inspection, operation, and maintenance activities.
- Adequate structural support and stability of the fly ash sampler assembly during operating conditions.
- Leak-free sealing arrangements at all duct connection, components joints sealing points.
- Resistance of all components and materials to the operating temperature, pressure, ash content, and environmental conditions of the flue gas system.
- Compact arrangement of the assembly to minimise obstruction and interference with adjacent plant and structures.
- Ease of removal and replacement of consumable or maintainable components such as collecting jars and nozzles.
- Compliance with applicable Eskom standards, site specifications, statutory regulations, and recognised engineering practices.

All supplied equipment and components shall be clearly identified and tagged in accordance with the Employer's plant codification and configuration management requirements.

The Contractor shall verify all dimensions and site conditions prior to finalising the design and manufacture of components. Any discrepancies identified during site verification shall be reported to the Project Manager for resolution before fabrication or installation proceeds.

The Contractor remains responsible for the completeness, functionality, and performance of the design and installed system.

3.5 Use of Contractor's design

- The Contractor takes full professional accountability and liability for the works as described in the works information.
- The Contractor adheres to all design requirements, codes of standards and regulations stated in this works information.
- Any discrepancy or ambiguity between the Employer's Specifications or requirements is to be immediately brought to the attention of the Project Manager for clarification.
- Where the Contractor requires additional information to design or install certain components of the Plant, the Contractor notifies the Project Manager of the Contractor's requirements a minimum of one (1) week before continuing with the works.

All documentation, as specified in this works information, forms part of the works and is supplied to the Project Manager by the Contractor. The Employer reserves the right to issue the Contractor's design or drawings to other Contractors for purposes of maintenance, spares, verifications, modifications in future or any other purposes required by the Employer. The Employer has total rights to use the design as the Employer requires. The Contractor notes that all drawings and other documentation supplied to the Employer become the property of the Employer upon completion of the works.

3.6 Design of Equipment

The Contractor shall be responsible for the design, selection, suitability, safety, and performance of all Equipment, temporary works, tools, and installation aids required for the execution of the Works.

Where specialised installation equipment or temporary works are required for activities including, but not limited to:

- Removal of the existing fly ash sampler system,
- Cutting and installation of flange openings on the economiser outlet ducting,
- Lifting and positioning of the new sampler assemblies, and
- Access to elevated work areas,

the Contractor shall submit details of such Equipment and temporary works to the Project Manager prior to use on site.

Submission of such information to the Project Manager shall not constitute acceptance of the Contractor's design of Equipment or temporary works and shall not relieve the Contractor of any responsibility or liability associated with the adequacy, safety, reliability, or performance thereof.

The Contractor shall ensure that all Equipment used on the Works is fit for purpose, properly maintained, certified where required, and operated by competent personnel in accordance with applicable statutory regulations and site requirements.

3.7 Equipment required to be included in the works

None.

3.8 As-built drawings, operating manuals and maintenance schedules

The Contractor shall provide complete as-built documentation for the installed fly ash sampler system upon completion of the Works.

The as-built documentation shall include, but not be limited to:

- Final as-built drawings reflecting the installed configuration.
- General arrangement drawings of the installed system.

- Detailed installation drawings showing:
 - Flange locations,
 - Mounting arrangements(bolting),
 - Probe orientation,
 - Reject line routing, and
 - Any modifications made to the economiser outlet ducting.
- Material specifications and component data sheets.
- Equipment identification and tagging schedules.
- Welding records and inspection reports, where applicable.
- Quality control and test records.
- Operating instructions for the fly ash sampler system.
- Recommended maintenance procedures and maintenance schedules.
- Recommended spare parts list for routine maintenance.
- Manufacturer's manuals and technical information for supplied components.

All drawings and documents shall:

- Be submitted in both hard copy and electronic format (PDF and editable format).
- Clearly indicate drawing numbers, revision numbers, and "As-Built" status.
- Comply with the Employer's document control and drawing standards.

Preliminary operating manuals and maintenance schedules shall be submitted to the Project Manager prior to Completion of the Works to allow for review and operational readiness. Final approved as-built documentation shall be submitted within the period stated in the Scope of Work or as agreed with the Project Manager, but no later than Completion of the Works. Failure to submit the required documentation may be considered as incomplete Works.

4. Procurement

People

4.1.1 Minimum requirements of people employed on the Site

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

4.1.2 BBBEE and preferencing scheme

Contractor must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures

4.1.3 SDL&I

Section 1: Specific Goals

A maximum of 10/20 points may be awarded to a tenderer for the specific goal specified for the tender. The points scored for the specific goal must be added to the points scored for price and the total must be rounded off to the nearest two decimal places. Subject to section 2(1)(f) of the Preferential Procurement Policy Framework Act, the contract must be awarded to the tenderer scoring the highest points.

B-BBEE Status Level of Contributor	Number of points (90/10 system)	Number of points (80/20 system)
1	10	20
2	9	18
3	6	14
4	5	12
5	4	8
6	3	6
7	2	4
8	1	2
Non-compliant contributor	0	0

NB: The following documents are required to claim preference points,

- Valid B-BBEE certificate issued by a SANAS accredited verification agency / sworn affidavit / CIPS affidavit
- Proof of ownership / shareholding (preferably CIPC documentation) inclusive of shareholding breakdown
- Certified ID copies of shareholder(s)
- Proof of Disability (where applicable)

Tenderer failing to provide documentation for the allocation of preference points will not be disqualified, but'

- May only score point out of 90/80 for price
- Scores 0 points out of 10/20 for specific goals

Section 3: SDL&I Objectives in line with Reconstruction and Development Programme (RDP) Goals

Tenderers who complete and submit the objectives as required, but who do not meet Eskom's targets, will not be disqualified. SDL&I objectives do not form part of scoring but commitments will form part of contractual obligations

1. Transformation – BBBEE Improvement or Retention Plan

Transformation remains an area of focus, where Eskom continuously strives to align itself with national transformation imperatives to unlock growth, drive industrialization, create employment and contribute to skills development.

Eskom encourages its suppliers to constantly strive to improve their B-BBEE rating. Whereas Tenderer/s will be allocated points in terms of a preference point system based on specific goals, Eskom also requests that tenderer/s submits their B-BBEE improvement or retention plan within 30 days of signing the contract.

Tenderer/s are therefore requested to indicate the extent to which they will maintain (only if the respondent is a Level 1) or may improve/maintain their B-BBEE status over the contract period if their B-BBEE status is level 2 or 3. Tenderer/s with a B-BBEE status level 4 at the time of contract award, shall migrate and achieve as a non-negotiable a milestone of B-BBEE Level 3 by the end of the first year of the contract and thereafter improve their B-BBEE status level or migrate by one level higher.

Tenderer/s with a B-BBEE recognition status of Level 5 to Level 8 or non-compliant at the time of contract award, shall migrate and achieve as a non-negotiable a milestone of Level 4 by the end of the first year of the contract and thereafter improve at least one B-BBEE Level higher of each year from the second year of the contract.

Tenderer/s are requested to submit their B-BBEE Improvement Plan as an essential document within 30 days of signing the contract.

NB: A valid B-BBEE certificate or Sworn Affidavit is a condition for contract award, if your company's annual Total Revenue is R10 Million or less you qualify as an Exempted Micro Enterprise therefore you can submit Sworn Affidavit. If your annual Total Revenue is R50 Million or less, you qualify as Qualifying Small Enterprise and must comply with all of the elements of QSE score card relevant to your sector unless an entity is at least 51% Black owned you are required to obtain a Sworn affidavit. If your Annual Total Revenue is above R50m you need to submit a Valid B-BBEE certificate.

2. Local Content

"Local Content" refers to value added in South Africa by South African resources. Where a single contract involves a combination of local and imported goods and/or services, the tender response

must be separated into its components as per the Price Schedule included with the tender documents. Local content is total spending minus the imported component.

Tenderers are required to submit their proposals in the table below.

Local Content	Eskom target	Tenderer Proposal
	100%	

- 3. Jobs.** Tenderers are required to submit proposals for the type and number of jobs that will be created and retained in South Africa as a direct result of being awarded a contract.

Type of Jobs to be created	Number of Jobs to be created

Type of Jobs to be retained	Number of Jobs to be retained

Section 3: SDL&I Penalty and Performance Security

Eskom will apply a penalty of 2.5% of the invoice amount for failure to meet SDL&I obligations.

Eskom will apply a penalty of 2.5% of the Contract Value for failure to meet SDL&I obligations.

For the duration of the contract, Eskom will retain 2.5% of every invoice (excluding VAT) as security for the fulfilment of all SDL&I Obligations. The retained amounts shall only be released to the Contractor upon:

- Eskom receives the SDL&I progress report/s from the contractor.
- Fulfilment of all SDL&I obligations by the contractor.
- Submission of an approved compliance report by SDL&I Department.

Section 6: General Information on Validity of Sworn Affidavits

The following must be considered when it comes to validity of Affidavits;

Tenderers submitting B-BBEE Sworn Affidavits must ensure that the affidavits meet the following key pointers to ensure their validity:

- Name/s of deponent as they appear in the identity document and the identity number.
- Designation of the deponent as the **director, owner or member** must be indicated in order to know that person is duly authorised to depose of an affidavit. **(Mark the applicable option).**
- Name of enterprise as per enterprise registration documents issued by the CIPC, where applicable, and enterprise business address.
- Percentage of black ownership, black female ownership and designated group. In the case of specialised enterprises as per Statement 004, the percentage of black beneficiaries must be reflected. **(No blank spaces to be left).**
- Indicate total revenue for the year under review and whether it is based on **audited financial statements or management account. (Mark the applicable option).**
- Financial year end as per the **enterprise's registration documents**, which was used to determine the total revenue. **(Financial year end to be stipulated by day/month/year).**
- B-BBEE Status level. An enterprise can only have one status level. **(Tick applicable level)**
- Empowering supplier status must be indicated. For QSEs, the deponent must select the basis for the empowering supplier status.

- Date deponent signed and date of Commissioner of Oath must be the same. **(The sworn affidavit must be signed in the presence of the Commissioner of Oath. Furthermore the Commissioner must also sign and stamp)**
- Commissioner of Oath cannot be an employee or ex officio of the enterprise because, a person cannot by law, commission a sworn affidavit in which they have an interest.

4.2 Subcontracting

4.2.1 Preferred subcontractors

- (1) The Contractor will be required to provide the Employer with all information regarding his Subcontractors. The Employer will need to accept all Subcontractors to be used by the Contractor.
- (2) The Contractor shall be responsible for all the activities performed by the Subcontractors.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

- (1) The Contractor shall be responsible for all documentation and work performed by Subcontractors.
- (2) The Contractor shall ensure that all work performed by his Subcontractor is in accordance to the Employer's Works Information and meet all quality requirements.
- (3) The Project Manager may make use of his quality control officers to conduct audits on work performed by the Subcontractor.

4.2.3 Limitations on subcontracting

- (1) The Contractor may not subcontract 100% of the scope of work.

4.2.4 Attendance on subcontractors

- (1) Not applicable

4.3 Plant and Materials

4.3.1 Quality

All Plant and Materials supplied for the Works shall be new, of good quality, free from defects, and suitable for the intended operating conditions and service environment of the economiser outlet ducting system.

All materials, components, fittings, and assemblies associated with the fly ash sampler system shall comply with the applicable project specifications, recognised engineering standards, statutory requirements, and manufacturer's recommendations.

The Contractor shall ensure that:

- All supplied components are fit for purpose and capable of reliable operation under the expected flue gas temperature, pressure, ash loading, and environmental conditions.
- Materials used for the sampler assemblies, probes, nozzles, reject pipes, mounting arrangements, and associated fittings are suitable for the application and resistant to wear, corrosion, and thermal effects.
- Fabrication and installation workmanship are of a high standard and in accordance with approved procedures.
- All welding activities are performed by qualified personnel using approved welding procedures.
- All Plant and Materials are properly protected during manufacture, transport, storage, and installation to prevent damage or deterioration.

Where a *defect* is identified, the Project Manager may instruct the Contractor to repair or replace the defective item. Any repair work shall restore the item to a condition equal to or better than the original specified

requirement. The Project Manager may require replacement of defective components where repairs are considered unsuitable or unacceptable.

The Contractor shall provide certificates of compliance, material certificates, inspection records, and any other quality documentation reasonably required by the Project Manager.

4.3.2 Plant & Materials provided “free issue” by the *Employer*

The Employer shall provide, as free issue material, only the material required for the installation of the flange openings on the economiser outlet ducting.

The Contractor shall be responsible for:

- Collection/drawing of the free issue materials from the Employer’s designated stores.
- Off-loading, handling, storage, care, custody, and control of the free issue materials after collection.
- Verification of quantities and condition of materials upon receipt.
- Reporting any shortages, damage, or discrepancies to the Project Manager immediately upon receipt.

The Contractor shall ensure that all free issue materials are properly stored and protected against loss, damage, contamination, or deterioration until installation. Any unused free issue materials remaining after completion of the Works shall be returned to the Employer in a clean and serviceable condition unless otherwise instructed by the Project Manager.

All other Plant, Materials, consumables, fittings, fasteners, supports, seals, gaskets, welding consumables, and system components (cyclone & collecting jar) required for the complete execution of the Works shall be supplied by the Contractor.

4.3.3 *Contractor’s* procurement of Plant and Materials

The Contractor shall be responsible for the procurement, manufacture, supply, transportation, delivery, off-loading, storage, and protection of all Plant and Materials required for the execution of the Works, except for materials specifically identified as free issue by the Employer.

The Contractor shall ensure that:

- All Plant and Materials are procured from reputable and approved suppliers with proven experience in similar applications.
- Materials and components comply with the approved design, applicable specifications, recognised standards, and site requirements.
- Procurement activities are planned and executed to prevent delays to the Works.
- Long lead items, if any, are identified and expedited accordingly.
- All materials are suitably packaged, handled, and transported to prevent damage or deterioration during transit and storage.
- All stored materials are adequately protected against corrosion, contamination, moisture, mechanical damage, and environmental exposure.

The Contractor shall maintain traceability of materials and components where applicable and shall provide relevant material certificates, certificates of compliance, inspection records, and manufacturer’s data sheets upon request by the Project Manager.

The Contractor shall provide all required technical documentation for the supplied equipment and materials, including:

- Material certificates,
- Equipment data sheets,
- Manufacturer’s specifications,
- Inspection and test records,
- Recommended operating instructions,
- Maintenance requirements, and

- Spare parts information.

All warranties and guarantees applicable to supplied Plant and Materials shall remain valid for the contractually required period and shall be made available to the Employer upon Completion of the Works.
The Contractor shall ensure that all delivered materials are clearly identified and stored in an orderly manner within designated storage areas on Site.

4.3.4 Spares and consumables

The Contractor shall supply all consumables required for the complete installation, testing, and commissioning of the fly ash sampler system.

Consumables shall include, but not be limited to:

- Welding consumables,
- Fasteners,
- Gaskets and sealing materials,
- Jointing materials,
- Protective coatings, and
- Any other consumable items required for the proper execution of the Works.

The Contractor shall also provide a recommended spare parts list for the fly ash sampler system, identifying critical and routine maintenance spares required for continued operation and maintenance of the system.

The Contractor shall supply the following minimum spare components upon completion of the Works:

- 2 spare sampling nozzles
- 2 spare collecting jars
- Spare seals and gaskets sufficient for 2 complete assemblies
- 4 cyclone separators

Any other components reasonably considered subject to wear or routine replacement.

All supplied spares shall be clearly labelled, suitably packaged, and protected against damage or deterioration during storage. The Contractor shall provide relevant manufacturer's data, specifications, and storage recommendations for all supplied spares and consumables.

4.4 Tests and inspections before delivery

The Contractor shall ensure that all Plant and Materials supplied for the Works are inspected and tested prior to delivery to Site to verify compliance with the approved design, specifications, and quality requirements.

The Project Manager and/or Supervisor shall have the right to witness any inspections and tests conducted during fabrication or assembly of the fly ash sampler system components.

The Contractor shall give the Project Manager at least five (5) working days' notice of any planned inspections or tests requiring witnessing.

Tests and inspections before delivery may include, where applicable:

- Dimensional inspections,
- Visual inspection of fabricated assemblies,
- Verification of material compliance certificates,
- Weld inspections,
- Fit-up inspections,
- Verification of component assembly,
- Leak testing where applicable,

The Contractor shall provide all necessary inspection and test records, certificates, and reports to the Project Manager prior to delivery to Site.

Acceptance of Plant and Materials following inspection or testing does not relieve the Contractor of responsibility for the quality, compliance, or performance of the supplied equipment and materials.

Any Plant or Materials found to be defective, damaged, non-compliant, or incomplete may be rejected by the Project Manager and shall be repaired or replaced by the Contractor at no additional cost to the Employer.

4.5 Marking Plant and Materials outside the Working Areas

Materials intended for incorporation into the Works and stored outside the Working Areas prior to delivery to Site shall be clearly marked and identifiable as being allocated to this contract.

The Contractor shall ensure that such Materials are:

- Clearly labelled with the contract number, project description, and item identification.
- Traceable to the relevant purchase orders, material certificates, and inspection records.
- Stored separately from materials intended for other contracts or purposes.
- Protected against damage, deterioration, theft, or contamination while in storage or transit.

Where payment is requested for Materials stored outside the Working Areas, the Contractor shall provide satisfactory evidence to the Project Manager that:

- Materials have been manufactured or procured for this contract,
- The items are clearly marked for this contract,
- Ownership is vested in the Employer where applicable, and
- The Plant and Materials are adequately insured and protected.

The Project Manager may inspect the stored Plant and Materials at the place of manufacture or storage prior to certification for payment.

4.6 Contractor's Equipment (including temporary works).

The Contractor shall provide all plant, tools, lifting equipment, temporary works, consumables, transport, access equipment, or any specialised installation equipment necessary for the execution and completion of the Works. All Contractor's Equipment shall be suitable for the intended duty, maintained in safe operating condition, and compliant with all applicable statutory requirements and site safety standards.

The Contractor shall, as a minimum, provide the following:

- Welding machines, cutting equipment, drilling tools, and associated temporary services required for duct modifications and installation activities.
- Alignment and measuring instruments necessary to ensure correct positioning and orientation of the fly ash sampler assemblies.
- Temporary blanking plates, sealing arrangements, and protection measures required during decommissioning and installation activities.
- Any temporary supports, bracing, or structural arrangements necessary during removal of the existing samplers and installation of the new assemblies.
- Suitable transport and storage arrangements to prevent damage or contamination of the fly ash sampler components prior to installation.

Where specialised or custom-manufactured equipment forms part of the Works, including the fly ash sampler assemblies, cyclone separators, probes, nozzle arrangements, and associated mounting systems, the contractor shall submit detailed fabrication drawings, material specifications, and assembly procedures to the Employer/Project Manager for review prior to manufacture.

The Employer reserves the right to introduce witness and hold points during the manufacture, assembly, factory acceptance inspection, and delivery stages of the specialised equipment. Such witness or hold points may include, but shall not be limited to:

- Verification of material certificates and component traceability.

- Dimensional inspections and fit-up verification of assembled systems.
- Inspection of welding quality and surface finishing.
- Factory assembly inspections prior to shipment.
- Verification of nozzle sizing and isokinetic sampling configuration.

No equipment shall be delivered to site prior to completion of the required inspections and release by the Employer/Project Manager where such hold points have been identified.

Review, inspection, witnessing, comments, or acceptance by the Employer or Project Manager shall not relieve the Contractor of any responsibility for the adequacy, safety, functionality, performance, quality, or compliance of the Contractor's Equipment or temporary works.

All temporary works shall be designed, erected, maintained, and removed by the Contractor in accordance with applicable standards and site requirements. The Contractor shall remain fully responsible for the integrity and safety of all temporary works throughout the execution of the Works.

4.7 Cataloguing requirements by the Contractor

Cataloguing shall be applicable to this Contract.

The Contractor shall comply with the Employer's cataloguing requirements in accordance with Procurement Instruction Number 1 of 2018 – *Incorporating Cataloguing into the Procurement Environment* (Unique Identifier 240-1289988974), including any latest revisions or site-specific cataloguing procedures applicable at the Station.

The Contractor shall ensure that all applicable equipment, components, and maintainable items supplied under this Contract are catalogued prior to handover of the Works. This shall include, but not be limited to:

- Fly ash sampler assemblies.
- Cyclone separators.
- Collecting jars.
- Isokinetic sampling probes and nozzles.
- Reject line pipes and cones.
- Mounting base plates and associated fittings.
- Any proprietary or maintainable components supplied as part of the system.

The Contractor shall provide all information required for cataloguing purposes, including but not limited to:

- Original Equipment Manufacturer (OEM) details.
- Manufacturer's part numbers.
- Equipment descriptions and technical specifications.
- Material specifications.
- Assembly drawings and datasheets.
- Recommended spare parts lists.
- Maintenance information where applicable.

All cataloguing data shall be submitted in the format and template prescribed by the Employer. The Contractor shall be responsible for the completeness, correctness, and timely submission of all cataloguing information.

Where National Stock Numbers (NSNs) or unique material codes are required, the Contractor shall cooperate with the Employer's cataloguing department to facilitate the registration process.

Practical Completion shall not be deemed achieved until all required cataloguing information has been submitted and accepted by the Employer.

5. Construction

5.1 Temporary works, Site services & construction constraints

5.1.1 *Employer's Site entry and security control, permits, and Site regulations*

The Contractor shall comply with all Employer site entry procedures, security requirements, permit systems, safety rules, and site regulations applicable at the Power Station for the full duration of the Contract.

No person shall be permitted access to Site without having completed the Employer's mandatory induction, medical fitness requirements where applicable, and security clearance procedures.

The Contractor shall ensure that all personnel entering the Site:

- Carry valid identification and access permits at all times.
- Attend and successfully complete all mandatory safety inductions and training required by the Employer.
- Comply with all access control procedures, security searches, and screening requirements.
- Adhere to all life-saving rules, environmental requirements, and emergency procedures.
- Wear the required personal protective equipment (PPE) at all times within designated work areas.

The Contractor shall be responsible for arranging and obtaining all permits required for the execution of the works, including but not limited to:

- Permit to Work.
- Hot Work Permits.
- Working at Heights Permits.
- Confined Space Entry Permits, where applicable.
- Lifting permits where required.

No work shall commence without the required approved permits in place.

The Contractor shall ensure that all work is executed in accordance with the Employer's permit-to-work system and outage planning requirements. The Contractor shall allow in the Contract Price for all time delays, escort requirements, security arrangements, inductions, permit approvals, access restrictions, and compliance obligations associated with working on the Employer's Site.

The Employer reserves the right to refuse entry to or remove from Site any person who fails to comply with site rules, safety requirements, or security procedures. The Contractor shall ensure that all vehicles, tools, equipment, and materials brought onto Site comply with the Employer's security and inspection requirements. The Employer may inspect any vehicle, equipment, container, or material entering or leaving the Site. Photography, video recording, and use of drones on Site shall be prohibited unless specifically authorised in writing by the Employer.

5.1.2 Restrictions to access on Site, roads, walkways and barricades

The Contractor shall execute the Works in a manner that minimises disruption to the Employer's operations, personnel, plant access, and normal Site activities. Access to certain areas of the Site may be restricted due to operational, safety, security, or outage requirements. The Contractor shall comply with all access limitations imposed by the Employer and shall only access authorised work areas.

The Contractor shall:

- Use only designated access routes, roads, walkways, stairways, and laydown areas approved by the Employer.
- Ensure that all personnel remain within authorised work zones at all times.
- Maintain clear and safe pedestrian access around the work areas throughout the duration of the Works.
- Coordinate all movement of materials, lifting activities, and large equipment with the Employer where such activities may affect plant operations or Site traffic.
- Request for and remove all barricading, install warning signs, danger tape, covers, and safety notices required to safely isolate the work areas and protect personnel and equipment.

Barricading shall:

- Clearly identify hazardous areas, overhead work zones, openings, lifting zones, and restricted areas.

- Be suitable for the level of hazard and maintained in good condition at all times.
- Comply with the Employer's safety standards and colour coding requirements.
- Include warning signage in prominent positions where applicable.

Where floor openings, duct openings, removed grating, or elevated work areas are created during the works, the Contractor shall provide adequate physical protection to prevent injury or damage. No materials, tools, cables, hoses, or equipment shall be left in positions that create trip hazards, obstruct escape routes, or interfere with normal plant operation. The Employer reserves the right to instruct the Contractor to remove or relocate any obstruction, barricade, material, or equipment that is considered unsafe or that interferes with Site operations.

All work areas shall be kept clean, orderly, and safe throughout the duration of the Works. Housekeeping shall be performed continuously and not only upon completion of the work.

5.1.3 People restrictions on Site; hours of work, conduct and records

The Contractor shall comply with all Site access requirements, security procedures, and station rules applicable to the power station and operating plant environment during the execution of the Works. The works are to be executed within a live operating power generation facility and strict control of personnel movement and activities shall apply at all times.

Site Access and People Restrictions

- Access to Site shall be limited to authorised personnel only.
- All personnel shall undergo site induction and comply with all Employer health, safety, environmental, and security requirements before commencing work.
- The Contractor shall ensure that all personnel are medically fit, competent, and adequately trained for the tasks to be performed.
- Personnel shall wear the prescribed personal protective equipment (PPE) at all times within operational areas.
- Alcohol, drugs, weapons, and any unsafe conduct shall be strictly prohibited on Site.
- Smoking shall only be permitted in designated smoking areas.

Hours of Work

- Normal working hours shall be agreed with the Employer and Project Manager prior to commencement of the Works.
- Work shall generally be executed during standard station working hours unless otherwise approved by the Employer.
- Any work required outside normal working hours, including weekends or public holidays, shall be subject to prior approval by the Employer and may require additional permits and supervision arrangements.
- The Contractor shall plan the Works to minimise disruption to station operations and outage activities.
- Access to certain work areas may be restricted depending on plant operating conditions, outages, or operational requirements.

Conduct on Site

- All personnel shall conduct themselves in a professional and safe manner at all times.
- The Contractor shall comply with all applicable Site safety procedures, permit-to-work systems, lock-out requirements, and risk control measures.
- Toolbox talks, risk assessments, and task briefings shall be conducted before commencement of daily activities.
- Any unsafe act, incident, near miss, or damage to plant shall be immediately reported to the Supervisor or Project Manager.

Records and Attendance Registers

- The Contractor shall maintain accurate daily records of all personnel on Site, including suppliers.
- Such records shall include:
 - Full names and company details;
 - Identification or employee numbers;

- Dates and times of Site entry and exit;
 - Work areas attended; and
 - Relevant competency or permit information where applicable.
- The Contractor shall make these records available to the Project Manager or Supervisor at any time upon request.
- Daily progress records, permits, inspection records, safety documentation, and attendance registers shall be retained for the duration of the Contract.
- These records may be used in the assessment of compensation events, delays, productivity, and compliance with Contract requirements.

5.1.4 Health and safety facilities on Site

- (1) It is required, for the proper co-ordination and execution of the works that the Contractor (if required) has an office on site for the duration of the installation and optimisation. A site will be made available to the Contractor for his yard within the power station security area. The yard is a raw site and will be used by the Contractor for the establishment of his offices, workshop and stores.
- (2) The Contractor's yard is subject to periodic inspection by the Supervisor. The location of the nearest sewer manhole, power distribution point, portable water connection storm water channel and road access point is indicated by the Supervisor. The Contractor is responsible for connection to the closest point of supply.
- (3) The Contractor provides, at his cost, a First Aid service to his employees. In the case where these prove to be inadequate, like in the event of a serious injury, the Employer's Medical Centre and facilities will be available.
- (4) Outside the Employer's office hours, the Employer's First Aid Services will only be available for serious injuries and life threatening situations.
- (5) The Employer will be entitled, however, to recover the costs incurred, for the use of the above Employer's facilities, from the Contractor.

5.1.5 Environmental controls, fauna & flora, dealing with objects of historical interest

- (1) The Contractor's complies with the requirements of section 2.4.
- (2) The Contractor shall comply with Lethabo Power Station environmental management system. This includes the identification, collection, storage, transportation and disposal of waste. Hazardous waste shall be disposed off in line with the applicable environmental legislation. It is important to note that all spillages must be cleaned immediately and reported to the Employer as soon as possible. It is the responsibility of the polluter to clean all spillages and for the rehabilitation of the polluted land.

5.1.6 Title to materials from demolition and excavation

- (1) The Contractor has no title to materials from excavation and demolition. All reusable equipment will remain the property of the Employer. All identified scrap material to be scrapped daily and disposed at the Employer's scrap yard

5.1.7 Cooperating with and obtaining acceptance of Others

5.1.8 Publicity and progress photographs

- (1) Lethabo Power Station is a national key point and taking of photos is not allowed onsite. Should there be a need to take pictures/photos on site permission should be requested in writing from the head of security.

5.1.9 Contractor's Equipment

The Contractor shall provide all equipment, tools, temporary works, transport, and ancillary items necessary for the safe and proper execution of the works associated with the removal of the existing fly ash sampler systems and installation of the new fly ash sampler assemblies.

General Requirements

- All Contractor's Equipment brought onto Site shall be suitable for the intended purpose, maintained in a safe operating condition, and compliant with applicable legislation, standards, and Site requirements.
- The Contractor shall ensure that all equipment operators are competent, trained, and where required, licensed or certified for the specific equipment being operated.
- Equipment shall not interfere with the safe operation of the power station or obstruct access routes, emergency exits, platforms, stairways, or operational equipment.
- The Contractor shall minimise the footprint of equipment and storage areas within the Working Areas due to space limitations around the economizer outlet ducting platforms.

Records of Equipment on Site

- The Contractor shall maintain an up-to-date register of all equipment brought onto Site, including equipment owned, leased, or hired by the Contractor or Subcontractors.
- The equipment register shall include:
 - Description and identification number of the equipment;
 - Ownership details;
 - Date of arrival and removal from Site;
 - Certification and inspection status where applicable; and
 - Operator details where required.
- The equipment register shall be made available to the Project Manager or Supervisor upon request at any time.

Lifting Equipment and Heavy Lifts

- All cranes, chain blocks, lifting tackle, slings, and lifting devices shall possess valid inspection and load test certificates.
- The Contractor shall submit lifting plans and risk assessments for approval prior to executing any heavy lifting activities.
- Lifting operations within boiler structures, ducting platforms, or confined access areas shall be carefully coordinated with the Employer and carried out under controlled conditions.
- The Contractor shall ensure that lifting equipment is positioned and operated in a manner that does not impose unsafe loads on existing plant structures or obstruct station operations.
- Any mobile cranes or large lifting equipment shall only be used in approved areas and shall be removed from Site or Working Areas when no longer required.

Scaffolding and Temporary Access

- Any scaffolding required for access to the economizer outlet ducting or elevated work areas shall be designed, erected, inspected, tagged, and dismantled by competent persons.
- Scaffolding shall comply with all applicable safety regulations and Site requirements.
- Temporary access platforms and scaffolding shall not obstruct normal plant operations or emergency access routes.
- The Contractor shall remove all temporary works from Site upon completion of the Works.

Noise and Environmental Control

- The Contractor shall ensure that all equipment used on Site is fitted with effective silencers or noise suppression devices where applicable.
- Equipment generating excessive noise, smoke, oil leaks, fumes, or vibrations shall not be permitted on Site.
- The Contractor shall take reasonable measures to minimise nuisance, dust generation, and environmental impacts arising from the use of Contractor's Equipment.
- Idling of engines shall be minimised, particularly within enclosed or operational plant areas.

Removal from Site

- Upon completion of the Works, the Contractor shall remove all Contractor's Equipment, temporary works, unused materials, debris, and waste from the Site.
- The Working Areas shall be left in a clean, safe, and serviceable condition to the satisfaction of the Project Manager and Employer.

5.1.10 Equipment provided by the *Employer*

(1) The Employer will **NOT** provide any equipment. The Contractor shall ensure all equipment as per the scope of work is catered for.

5.1.11 Site services and facilities

The Employer may provide limited existing Site services and facilities for the execution of the Works associated with the replacement of the fly ash sampler systems, subject to availability, operational constraints, and prior approval by the Project Manager or Supervisor.

Electrical Power Supply

- The Employer may provide access to an existing temporary electrical power supply point within the station for construction activities.
- The exact connection point and voltage requirements shall be confirmed during Site access and planning meetings.
- The Contractor shall provide all temporary distribution boards, extension leads, plugs, adapters, earth leakage protection, cabling, and related equipment necessary for the safe utilisation of the power supply.
- All temporary electrical installations and connections shall comply with applicable regulations and Site electrical safety requirements.
- Only authorised persons shall make connections to the Employer's electrical systems.

Waste Disposal

- The Contractor shall be responsible for the collection, handling, and disposal of all waste generated from the Works, including:
 - Removed sampler components;
 - Scrap metal;
 - Insulation materials;
 - Packaging materials;
 - General construction waste;
- Waste disposal shall comply with Site environmental requirements, following disposal colour coding and applicable legislation.

Ablution and Welfare Facilities

- Existing Site ablution facilities may be made available to the Contractor's personnel in designated areas.
- The Contractor shall ensure that such facilities are used responsibly and kept in a clean and hygienic condition.
- Any additional welfare facilities required by the Contractor's workforce shall be provided by the Contractor.

Telecommunications and Communications

- The Contractor shall provide its own communication equipment necessary for execution and supervision of the Works.

Lighting

- General station lighting may be available in certain work areas; however, the Contractor shall provide all additional temporary lighting required for safe execution of the Works, including lighting for elevated platforms, confined areas, and night or low-light work.

- All temporary lighting equipment shall be suitable for industrial use and compliant with Site safety requirements.

Fire Protection

- All hot work shall be conducted under approved permit-to-work conditions and in compliance with Site fire prevention requirements.

Compressed Air and Other Utilities

- Unless specifically agreed otherwise, compressed air and other utility services shall not be provided by the Employer.
- The Contractor shall make its own arrangements for any additional utility requirements necessary for the execution of the Works.

General

- The Contractor shall inspect and verify the availability and suitability of all Site services prior to commencement of the Works.
- The Contractor shall ensure that all connections to Site services are safe, properly protected, and do not interfere with existing plant operations.
- The Contractor shall provide everything else necessary for Providing the Works.

5.1.12 Facilities provided by the Contractor

The Contractor shall provide and maintain all temporary facilities, accommodation, storage, tools, equipment, transport, and support services necessary for the safe and effective execution of the Works associated with the replacement of the fly ash sampler systems.

Contractor's Temporary Facilities

The Contractor shall provide, where required for the execution of the Works:

- Temporary site offices and supervision facilities;
- Secure storage containers or laydown areas for materials, tools, sampler assemblies, fittings, and equipment;
- Welfare facilities for Contractor personnel where existing station facilities are insufficient;
- Temporary workshops or fabrication areas for minor fitting or assembly activities;
- Temporary lighting and power distribution equipment;
- Waste collection containers and housekeeping facilities; and
- Suitable transport and vehicles for movement of personnel, tools, and materials within the Site.

All temporary facilities shall be:

- Suitable for use within an operating power station environment;
- Kept clean, orderly, and safe at all times;
- Positioned only in approved areas allocated by the Employer; and
- Maintained in a condition that does not create safety, environmental, or operational risks.

Site Accommodation and Office Requirements

- Unless otherwise instructed, the Employer will not provide dedicated office accommodation for the Contractor.
- The Contractor shall provide its own office accommodation, office furniture, computers, printers, communication equipment, and associated consumables necessary for management and supervision of the Works.
- The Contractor shall make reasonable provision for the Project Manager and Supervisor to access meeting space, drawings, inspection records, permits, and progress documentation during Site activities.

Storage and Laydown Areas

- Storage and laydown areas shall be limited to locations approved by the Employer.
- The Contractor shall ensure that materials and equipment are safely stacked, secured, and protected against damage, weather exposure, and unauthorised access.
- No materials or equipment shall obstruct access routes, walkways, emergency exits, operating equipment, or fire-fighting facilities.
- Flammable, hazardous, or pressurised materials shall be stored in accordance with Site safety and environmental requirements.

Housekeeping and Maintenance

- The Contractor shall maintain all temporary facilities in a clean, safe, and serviceable condition throughout the duration of the Contract.
- Accumulation of scrap, waste, packaging, and redundant materials within work areas shall not be permitted.

5.1.13 Existing premises, inspection of adjoining properties and checking work of Others

Before commencing any Works on the economiser outlet ducting or associated boiler plant areas, the Contractor shall inspect the existing plant, structures, platforms, supports, ducting, access ways, and adjacent equipment that may be affected by the execution of the Works. The inspection shall be carried out jointly with the Employer's representative where required.

The Contractor shall record the condition of the existing installation areas, including the existing carbon online grid (Cegrit) fly ash sampler systems, ducting penetrations, support arrangements, insulation, surrounding steelwork, and any adjacent plant or equipment that may be impacted during removal, modification, welding, cutting, drilling, or installation activities. Records shall include dated photographs and written observations and shall be submitted to the Project Manager before commencement of the affected Works.

Where the Works interface with existing plant, equipment, or work executed by Others, the Contractor shall inspect such work sufficiently in advance to avoid delays to the Works.

The Contractor shall notify the Project Manager promptly in writing of any defects, obstructions, dimensional discrepancies, unsafe conditions, or incompatibilities that may affect the design, installation, commissioning, or operation of the Works.

5.1.14 Survey control and setting out of the *works*

The Contractor shall be responsible for the accurate setting out, alignment, positioning, and installation of all components associated with the replacement of the fly ash sampler systems on the economizer outlet ducting.

Existing Plant Reference Information

- Existing station drawings, ducting arrangement drawings, and general plant layout information may be made available by the Employer for reference purposes, subject to availability.
- The Contractor shall verify all dimensions, levels, orientations, and installation positions on Site prior to commencement of fabrication or installation activities.
- The Employer does not guarantee the accuracy of existing drawings or as-built information, and the Contractor shall satisfy itself regarding actual Site conditions.

Survey Control

- The Contractor shall establish and maintain all survey control necessary for the execution of the Works.
- The Contractor shall ensure accurate positioning of:
 - New flange openings on the economizer outlet duct roof;
 - Fly ash sampler mounting locations;
 - Sampling probe insertion depth and orientation;
 - Base plate alignment; and
 - Reject line routing and support positions.
- Survey control shall ensure that the installed fly ash sampler assemblies are correctly aligned to achieve the required sampling configuration and operational functionality.

Setting Out Requirements

- The Contractor shall take all necessary measurements on Site before commencement of fabrication, cutting, drilling, or welding activities.
- The Contractor shall verify:
 - Duct wall thicknesses and dimensions;
 - Existing structural clearances;
 - Access platform positions;

- All setting out activities shall be carried out by competent personnel using suitable calibrated measuring equipment.

Responsibility for Accuracy

- The Contractor shall be fully responsible for the correctness of all setting out and installation work.
- Any errors arising from incorrect measurements, setting out, fabrication, or positioning shall be corrected by the Contractor at its own cost.
- No modifications to existing plant structures or ducting outside the approved scope shall be undertaken without prior approval from the Employer.

As-Built Information

- Upon completion of the Works, the Contractor shall provide updated as-built information reflecting the final installed positions and arrangement of the fly ash sampler systems, including any approved deviations from existing drawings or layouts.

5.1.15 Excavations and associated water control

N/A

5.1.16 Underground services, other existing services, cable and pipe trenches and covers

5.1.16.1 Supply of electricity

Electricity will be made available for construction purposes free of charge from power points which will be indicated by the Project Manager. The Contractor will be responsible for the provision of the reticulation system from the point of supply. Both 220 (AC) Volt and 380 (AC) Volt are available on request. All points of supply requested by the Contractor are provided in terms of quantity and location at the discretion of the Project Manager. No guarantees of power supply quality are given, and power supply breaks of some duration may occur without warning.

The Contractor makes arrangements at his own expense to improve continuity and quality of power where necessary for any reason and no claim of any nature relating to power failures is considered. No connection is made to the permanent installation at the Power Station without the prior acceptance of the Project Manager. The power supply is managed in accordance with the latest revision of the Employer's safety regulations, Operating Regulations for High-Voltage Systems and Plant Safety Regulations. The Contractor shall ensure that all electrical equipment are tested and accompanied by COC or proof of tests certificates before connections to Eskom supply is permitted.

5.1.16.2 Lighting

The Contractor at his own expense provides temporary local lighting in accordance with the requirements of the Occupational Health and Safety Act where necessary. The Project Manager provides no local lighting. All construction lighting is the responsibility of the Contractor.

5.1.16.3 Water

Water is made available on request free of charge from water points on site. The Contractor supplies at his own cost all connections, fittings, piping work, temporary plumbing, and pumps necessary to lead water from the Employer's points of supply to the various points where it is required. The Contractor is responsible for maintaining his equipment and to removal at Completion of the whole of the works.

The Project Manager does not guarantee continuity of supply and the Contractor makes his own provision for standby supplies to maintain continuity of work. Claims of any nature relating to discontinuity of water supply are not considered.

Water wastage due to un-maintained pipe work or fittings provided by the Contractor will be calculated and will be for the cost of the Contractor.

5.1.16.4 Roads and vehicles

Main access roads are surfaced and complete and may be used by the Contractor with the necessary care. The Employer maintains the Site roads, described above, to a fair condition. Any costs incurred by the Project Manager from damage caused to underground services, structures, etc. as a result of the Contractor not using the prescribed routes is recovered from the Contractor. The Contractor provides temporary access points from the prescribed routes and roads to the points where the Contractor is required to perform work, having first obtained permission in writing from the Project Manager.

All vehicles used on site, by the Contractor will be road worthy and fitted with fire extinguishers as required.

All road signs, traffic laws and regulations on site shall be adhered to by the Contractor. Contractor's employees failing to comply with the above will be denied access onto site.

Control of noise, dust, water and waste

(1) The Contractor shall comply with OHS Act for health and safety of the plant and personnel

Sequences of construction or installation

To be shown the schedule

Giving notice of work to be covered up

Must be in line with approved method statement

Hook ups to existing works

N/A

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 Work to be done by the Completion Date

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and Others from doing their work.

	Item of work	To be completed by
	As built drawings of	Within days after Completion
	Performance testing of the <i>works</i> in use as specified in paragraph of this Works Information.	See performance testing requirements.

5.2.2 Use of the *works* before Completion has been certified

The Employer may, for quality purposes, carry out inspection, testing, or commissioning, use or operate portions of the Works prior to Completion being certified without such use constituting Take Over of the Works.

Such use may include, but is not limited to:

- Inspection of installed fly ash sampler assemblies;

- Verification of fitment, alignment, and accessibility;

The Contractor shall remain fully responsible for the Works, including care of the Works, correction of Defects, protection of equipment, and completion of all outstanding work until Completion has been certified.

5.2.3 Materials facilities and samples for tests and inspections

The Contractor shall provide all materials, labour, tools, equipment, consumables, and temporary facilities necessary for carrying out inspections, examinations, measurements, and testing associated with the Works.

Contractor's Responsibilities

The Contractor shall provide, as applicable:

- Access to all fabrication, assembly, and installation work for inspection by the Project Manager or Supervisor;
- Measuring instruments, gauges, and calibrated testing equipment necessary for verification of the Works;
- Test samples, weld samples, material certificates, and inspection records where required;

Testing and Inspection Requirements

The Works may be subject to inspection and testing at various stages, including:

- Verification of dimensions and fit-up prior to installation;
- Inspection of fabricated sampler assemblies;
- Weld inspections on ducting modifications and mounting arrangements;
- Alignment and positioning checks of the sampling probes;
- Inspection of sealing arrangements for redundant openings and new flange installations;
- Functional checks of the installed fly ash sampler systems; and
- Final inspection prior to Completion.

The Contractor shall provide reasonable notice to the Project Manager or Supervisor before any inspection or test requiring witnessing is carried out.

Defective Work

If any materials, workmanship, fabrication, or installation are found not to comply with the Contract requirements, the Contractor shall promptly repair, replace, or retest the affected work at its own cost.

5.2.4 Commissioning

The Contractor shall carry out commissioning activities for the installed fly ash sampler systems to verify that the assemblies have been correctly installed, are mechanically sound, and are capable of performing the intended sampling function.

Commissioning shall be completed prior to Completion being certified. Completion of works is subject to sample displaying adequate functioning.

Scope of Commissioning

Commissioning activities shall include, as applicable:

- Verification of correct installation and orientation of the fly ash sampler assemblies;
- Inspection of mounting arrangements, flange installations, and sealing integrity;
- Verification of probe insertion depth, nozzle positioning, and reject line arrangement;
- Inspection of cyclone separator and collecting jar installation;
- Verification that all redundant openings from the removed systems have been properly sealed;
- Confirmation that all fasteners, fittings, supports, and connections are secure;
- Functional inspection and cleaning of the installed assemblies where required; and
- Demonstration that the system is ready for operational use.

Commissioning Procedures

- The Contractor shall submit a commissioning procedure and inspection checklist to the Project Manager prior to commencement of commissioning activities.

- Commissioning activities shall be coordinated with the Employer to accommodate plant operating conditions and access restrictions.
- All commissioning shall be conducted in accordance with Site safety requirements, permit-to-work procedures, and operational constraints.

Defects Identified during Commissioning

- Any defects, misalignment, leaks, loose fittings, damaged components, or non-compliant installation identified during commissioning shall be corrected by the Contractor at its own cost before Completion.
- The Contractor shall repeat any relevant inspections or checks following corrective work.

Completion of Commissioning

- Commissioning shall only be regarded as complete once the Project Manager is satisfied that:
 - The fly ash sampler systems have been installed in accordance with the accepted design and Contract requirements;
 - All inspections and checks have been satisfactorily completed;
 - Any identified Defects have been corrected; and
 - The Works are ready for normal operational use by the Employer.
 - Sampler is sampling as per required operational capability.
- The Contractor shall submit commissioning records, inspection checklists, and relevant completion documentation as part of the handover process.

5.2.5 Start-up procedures required to put the *works* into operation

The start-up and return to service of the economizer outlet ducting and associated plant equipment shall remain under the control of the Employer's operating personnel.

The Contractor shall provide all necessary technical support, attendance, and assistance required during start-up activities associated with the newly installed fly ash sampler systems.

Contractor's Responsibilities during Start-Up

The Contractor shall:

- Ensure that all installation, inspection, cleaning, and commissioning activities have been completed prior to start-up;
- Confirm that all tools, temporary supports, scaffolding, loose materials, and foreign objects have been removed from the Work Areas;
- Verify that all fly ash sampler assemblies, probes, collecting jars, reject lines, supports, and flange connections are secure and ready for operation;
- Ensure that all temporary isolations, blanks, covers, and protection devices installed by the Contractor have been removed where required;
- Make competent personnel available during start-up to respond to any installation-related issues;
- Assist the Employer with inspection of the installed systems during initial operation; and
- Rectify any defects or deficiencies identified during start-up activities.

Operational Start-Up

- The Employer shall be responsible for the operation, energisation, pressurisation, and normal running of the plant.
- The Contractor shall not operate station plant or associated systems unless specifically authorised by the Employer.
- Start-up activities shall be coordinated with the Employer's operating schedules, outage requirements, permit-to-work systems, and operational procedures.

Monitoring during Initial Operation

During initial operation of the units, the Contractor may be required to:

- Attend inspections of the installed fly ash sampler systems;
- Check for air leaks, vibration, loose fittings, abnormal conditions, or mechanical instability;
- Verify accessibility and operational suitability of the installed assemblies; and
- Assist with adjustments required to achieve the intended installation configuration.

Safety Requirements

- All start-up support activities shall be carried out in compliance with Site safety procedures, permit conditions, lock-out requirements, and instructions issued by the Employer's authorised personnel.
- The Contractor shall ensure that its personnel remain clear of hazardous operational areas unless authorised to enter such areas during start-up activities.

Defects during Start-Up

- Any defects, failures, installation deficiencies, or damage attributable to the Contractor's work identified during start-up shall be corrected by the Contractor at its own cost and within timeframes agreed with the Project Manager.

5.2.6 Take over procedures

Take Over of the Works shall occur upon successful Completion of all activities related to the replacement of the fly ash sampler systems and after the Employer has verified that the installation complies with the approved design, technical specifications, quality requirements, and safety standards.

The Contractor shall notify the Employer in writing once the Works are considered complete and ready for inspection and Take Over. The Take Over process shall include, but not be limited to, the following:

- Completion of the installation of all twelve (12) fly ash sampler assemblies, including the cyclone separator, collecting jar, isokinetic sampling probe with nozzle, reject pipe, and associated fittings.
- Confirmation that all existing carbon online grid (Cegrit) samplers and redundant components have been safely decommissioned, removed, and all openings sealed off in accordance with approved procedures.
- Verification that all mounting flanges and duct modifications on the economiser outlet ducting have been completed and inspected.
- Submission of quality documentation, including inspection records, material certificates, welding records (where applicable), and as-built drawings.
- Completion of functional checks and inspections to confirm correct installation, alignment, accessibility, and mechanical integrity of the sampler systems.
- Housekeeping and removal of all temporary works, excess materials, tools, waste, and debris from the work areas.
- Handover of operation and maintenance information relevant to the installed equipment.

The Employer reserves the right to inspect the Works prior to Take Over and to identify any defects, incomplete items, or non-conformances requiring rectification by the Contractor before acceptance.

Where required by the Employer, the Contractor shall provide reasonable post-completion support during the Take Over period, which may include:

- Technical assistance during initial operation or inspection activities;
- Temporary supervision or standby personnel;
- Assistance with defect correction or adjustments identified during Take Over inspections.

Take Over shall only be deemed complete once the Employer has formally accepted the Works and issued the relevant Take Over or Completion certification in accordance with the Contract.

5.2.7 Access given by the *Employer* for correction of Defects

Where access to any part of the Works is required after Take Over for the correction of Defects, the Employer, through the Project Manager, shall provide the Contractor with reasonable access to the affected areas in accordance with Clause 43.4 of the Contract.

As the Works are located within an operational power station environment and on economiser outlet ducting associated with operating generating units, all access shall be subject to the Employer's operational, safety, and permit requirements. The Contractor shall comply with all applicable site access procedures before access is granted, including but not limited to:

- Obtaining the required permits to work and access authorisations;
- Compliance with the Employer's safety rules, induction requirements, and outage procedures;

- Coordination with the Employer's operating personnel and outage planners;
- Adherence to lock-out/tag-out (LOTO) and isolation procedures where applicable;
- Provision of method statements and risk assessments for the corrective work activities;
- Compliance with scaffolding, working-at-height, confined space, and hot work requirements where applicable.

The timing and duration of access shall be agreed with the Employer to minimise disruption to plant operations and maintenance activities. Access to operational areas may be restricted to planned outage periods or approved maintenance windows.

The Contractor shall ensure that all personnel, tools, equipment, and materials required for defect correction activities are controlled and managed in accordance with site-specific safety and security requirements. Upon completion of defect correction works, the Contractor shall restore the affected area to a clean and safe condition and notify the Project Manager that the corrective works have been completed for inspection and close-out.

5.2.8 Performance tests after Completion

After Completion of the Works and prior to final acceptance, the Contractor shall conduct performance inspections and functional verification tests on the installed fly ash sampler systems to demonstrate compliance with the approved design, specified operational requirements, and installation standards.

The performance testing activities shall be coordinated with the Employer and carried out during suitable plant operating conditions as agreed with the Project Manager and station operating personnel.

The performance tests and inspections shall include, but not be limited to, the following:

- Verification that all twelve (12) fly ash sampler assemblies have been installed in the correct positions and orientations on the economiser outlet ducting;
- Inspection and confirmation of the mechanical integrity and secure mounting of the base plate, cyclone separator, collecting jar, sampling probe, nozzle, reject line pipe, and associated fittings;
- Verification that the installed sampling probes and nozzles comply with the approved design dimensions and specified sampling requirements;
- Confirmation that all duct penetrations, flange installations, and sealing arrangements are free from visible leakage and are suitably secured;
- Inspection of reject line routing and installation to ensure unobstructed flow and proper support arrangements;
- Verification that the installed assemblies are accessible and suitable for operation, inspection, and maintenance activities;
- Functional confirmation that the sampler assemblies are capable of operating under normal boiler operating conditions without mechanical failure, excessive vibration, or loss of sealing integrity.

Where required by the Employer, the Contractor shall provide technical support personnel during initial operational observations of the installed systems.

Any defects, deficiencies, or non-conformances identified during the performance testing or inspection period shall be corrected by the Contractor at no additional cost to the Employer, after which the affected tests or inspections shall be repeated.

The Contractor shall record all test and inspection results and submit a signed performance test report to the Project Manager for review and acceptance. Acceptance of the performance tests shall form part of the requirements for final handover of the Works.

5.2.9 Training and technology transfer

The Contractor shall provide training and technical knowledge transfer to the Employer's designated operating and maintenance personnel following installation and prior to final handover of the Works.

The training shall be conducted on site and shall cover, as a minimum, the following aspects related to the installed fly ash sampler systems:

- General system overview and functionality of the fly ash sampler assemblies;

- Identification and function of the major components, including the cyclone separator, collecting jar, sampling probe, nozzle, reject line pipe, and associated fittings;
- Routine operational checks and inspection requirements;
- Safe removal, handling, and reinstallation procedures for the collecting jars and associated components;
- Preventative maintenance requirements and recommended maintenance intervals;
- Identification of common defects, wear, blockages, or operational issues and recommended corrective actions;
- Safety precautions applicable to working on or near the installed systems;
- Procedures for replacement or adjustment of probes, nozzles, and associated components where applicable.

The Contractor shall provide suitably qualified personnel to conduct the training and shall ensure that the training material is aligned with the installed equipment and approved design documentation.

As part of the technology transfer process, the Contractor shall provide the Employer with the following documentation:

- Operation and maintenance manuals;
- Assembly drawings and as-built drawings;
- Recommended spare parts lists;
- Inspection and maintenance procedures;
- Material specifications and technical datasheets for supplied components.

Training attendance registers and copies of all training materials shall be submitted to the Project Manager as part of the handover documentation.

The cost of all training and technology transfer activities shall be deemed to be included in the Contract Price.

5.2.10 Operational maintenance after Completion

Following Completion and Take Over of the Works, the Contractor may be required to provide limited operational maintenance support for the installed fly ash sampler systems during the Defects Correction Period, as instructed by the Employer or Project Manager. Such operational maintenance activities shall not replace or relieve the Contractor of obligations related to Defect correction under the Contract, but shall comprise routine maintenance support necessary to ensure continued satisfactory operation of the installed systems.

The operational maintenance activities may include, but shall not be limited to, the following:

- Routine inspection of the fly ash sampler assemblies for loose components, excessive wear, corrosion, or mechanical damage;
- Cleaning of collecting jars, cyclone separator components, probes, nozzles, and reject lines where required;
- Verification of the integrity of mounting arrangements, fasteners, seals, and flange connections;
- Minor adjustments required to maintain correct alignment or operation of the sampler assemblies;
- Inspection for blockages or excessive ash build-up within the sampling and reject lines;
- Replacement of consumable items or minor components where required as part of normal maintenance activities;
- Technical support and maintenance advice to the Employer's operating and maintenance personnel.

All maintenance activities shall be planned and coordinated with the Employer in accordance with station operating requirements, permit systems, and applicable safety procedures.

The Contractor shall maintain records of all operational maintenance activities carried out during this period and shall submit such records to the Project Manager upon request.

Unless otherwise specified in the Contract, the cost of operational maintenance support during the Defects Correction Period shall be included in the Contract Price.

6. Plant and Materials standards and workmanship

. The design and construction may be compiled in accordance with systems within the works.

6.1 Investigation, survey and Site clearance

Prior to commencement of detailed design, fabrication, or installation activities, the Contractor shall carry out all necessary investigations, inspections, and site verification activities required to execute the Works safely and in accordance with the Contract requirements. The Contractor shall verify all existing site conditions associated with the economiser outlet ducting, existing fly ash sampler installations, supporting structures, access arrangements, and surrounding plant interfaces before commencing any modification or installation work.

The investigation and survey activities shall include, but not be limited to, the following:

- Verification of the location and condition of the existing carbon online grid (Cegrit) sampler installations;
- Confirmation of duct dimensions, wall thicknesses, existing flange arrangements, and available mounting positions;
- Verification of accessibility for installation, maintenance, and future operation of the fly ash sampler systems;
- Identification of interferences with existing plant, structures, piping, cable routes, platforms, insulation, or access ways;
- Inspection of existing structural support conditions relevant to the installation of the new assemblies;
- Verification of actual site measurements prior to fabrication of components;
- Assessment of lifting, rigging, scaffolding, and temporary access requirements.

The Contractor shall be responsible for confirming the suitability of the proposed installation locations and for identifying any discrepancies between actual site conditions and the issued design information. Any discrepancies identified shall immediately be reported to the Project Manager before proceeding with the affected work.

Site clearance activities shall be limited to the minimum required for execution of the Works. The Contractor shall ensure that no unnecessary removal, damage, or disturbance occurs to existing plant, insulation, structures, equipment, cables, or services.

Where temporary removal of existing items is required to facilitate the Works, such items shall be clearly identified, protected, stored where applicable, and reinstated to their original or approved condition upon completion of the Works.

All investigation, survey, and site clearance activities shall be carried out in accordance with the Employer's site safety requirements, permit systems, environmental requirements, and operational constraints applicable to work within an operating power station environment.

6.2 Building works

This section covers all minor building and associated construction works required for the execution of the fly ash sampler replacement project, including modifications to existing structures, duct penetrations, supports, access arrangements, and reinstatement works associated with the installation of the new sampler systems.

The Contractor shall ensure that all building and construction-related activities are carried out in accordance with recognised South African standards, good engineering practice, and the Employer's site-specific requirements applicable to an operational power station environment.

The building works shall include, but not be limited to, the following:

- Cutting, preparation, and modification of economiser outlet ducting roof sections for installation of new mounting flanges;

- Installation of mounting arrangements and associated structural support components where required;
- Removal and sealing-off of existing sampler penetrations and redundant openings after decommissioning of the old system;
- Minor structural steel modifications or support works necessary for safe installation and operation of the new sampler assemblies;
- Reinstatement of insulation, cladding, protective coverings, coatings, and affected finishes disturbed during the Works;
- Provision and removal of temporary access arrangements, scaffolding supports, and working platforms where required;
- Repair of any damaged surfaces, structures, or surrounding infrastructure resulting from the Contractor's activities.

Applicable Standards and Specifications

Unless otherwise specified, all building and associated construction works shall comply with the latest applicable editions of the following, where relevant:

- SANS standards applicable to structural steelwork, welding, coatings, and construction practices;
- Occupational Health and Safety Act and applicable Construction Regulations;
- Employer's site standards, safety specifications, and permit requirements;
- Approved project drawings, specifications, and installation procedures.

Workmanship Requirements

All workmanship shall be of a high standard and performed by suitably qualified and competent personnel. The Contractor shall ensure that:

- All cutting, welding, grinding, drilling, and fitting activities are executed neatly and safely;
- Structural modifications do not compromise the integrity of existing ducting, structures, or plant;
- All installed components are properly aligned, secured, and protected against corrosion and mechanical damage;
- Housekeeping is maintained throughout the execution of the Works;
- All affected areas are reinstated to a condition equal to or better than that existing prior to commencement of the Works.

Any damaged plant, equipment, structures, insulation, or finishes resulting from the Contractor's activities shall be repaired or replaced by the Contractor at no additional cost to the Employer.

6.3 Other [as required]

7.1 Drawings issued by the *Employer*

Note: Some drawings may contain both Works Information and Site Information.

[illegible]

PART 4: SITE INFORMATION

Core clause 11.2(16) states

“Site Information is information which

describes the Site and its surroundings and
is in the documents which the Contract Data states it is in.”

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information

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

1. Site Procedures and Regulations

1.1 Health and Safety Requirements

The *Contractor* and his sub-*Contractors* ensure at all times compliance with safety regulations imposed by any Act of Parliament, ordinance or any regulation or by-law of any local or statutory authority.

- The *Contractor* acts in accordance with the health and safety requirements stated in the Works Information.
- In carrying out its obligations to the *Employer* in terms of this contract; in Providing the Works; in using Plant, Materials and Equipment; and while at the Site for any reason, the *Contractor* complies and procures and ensures the compliance by its employees, agents, Sub-*Contractors*, and mandataries with:
- the provisions of the Occupational Health and Safety Act 85 of 1993 (as amended) and all regulations in force from time to time in terms of that Act (“the OHSA”); and the Eskom “Health, Safety and Environmental specifications for *Contractors*” document attached to the Works Information (as amended from time to time) and such other Eskom Safety Regulations as are applicable to the *works* and are provided in writing to the *Contractor* (collectively “the Eskom Regulations”). The Eskom Regulations may be amended from time to time by the *Employer* and all amendments will be provided in writing to the *Contractor*. The *Contractor* complies with the provisions of the latest written version of the Eskom Regulations with which it has been provided; and the health and safety plan prepared by the *Contractor* in accordance with the SHEQ Requirements (The OHSA and the Eskom Regulations are collectively referred to as the “SHEQ Requirements”).
- The *Contractor*, at all times, considers itself to be the “*Employer*” for the purposes of the OHSA and shall not consider itself under the supervision or management of the *Employer* with regard to compliance with the SHEQ Requirements, the *Contractor* shall furthermore not consider itself to be a subordinate or under the supervision of the *Employer* in respect of these matters. The *Contractor* is at all times responsible for the supervision of its employees, agents, Sub-*Contractors*, and mandataries and takes full responsibility and accountability for ensuring they are competent, aware of the SHEQ Requirements and execute the *works* in accordance with the SHEQ Requirements
- The *Contractor* acknowledges that it is fully aware of the requirements of all the above and undertakes to employ only people who have been duly authorized in terms thereof and who have received sufficient training to ensure that they can comply therewith.
- The *Contractor* ensures that all statutory appointments and appointments required by any Eskom Regulations are made and that all appointees fully understand their responsibilities and are trained and competent to execute their duties. The *Contractor* supervises the execution of their duties by all such appointees.
- The *Contractor* shall appoint a person who will liaise with the Eskom Safety Officer responsible for the premises relevant to this contract. The person so appointed shall, on request: supply the Eskom Safety Officer with copies of minutes of all Health and Safety Committee meetings, whenever he is required to do so; supply the Eskom Safety Officer with copies of all appointments in respect of employees employed on this contract, in terms of the Act and Regulations and shall advise the Eskom Safety Officer of any changes thereto.

Low Service Damages	Minimum percentage for low service damages	Limit of low Service Damages
Closing of NCRs: Rework (any work repeat) - 1 st NCR to be issued, 2 nd rework penalty applies.	5% of the task order value to be charged on 2 nd rework.	If the reworks amount to 60% of the works, termination
Poor House Keeping: 1. Failure to submit Gemba Walks report. 2. Closure of Gemba walk Actions where its within contractors' control. 3. Clean conditions of Working Space. (Adherence to House Keeping Checklist -refer to attachment) 4. Housekeeping during site de-establishment (working space/areas/yard) to be completed by contractor before leaving site. a. <i>e.g. Removal of rubble, weeds, equipment, containers, etc</i>	1. 0,5% per day will be charged. 2. 0.5% for weekly actions 3. 2% as and when housekeeping issues are identified. 4. 5% of the task order value to be charged	1. Limited to 2% of the task order value per month. 2. Limited to 2% of the task order value per month. 3. Limited to 5% of the task order value.

Safety Incidents: Occupational Hygiene & Safety 1. Not providing appropriate PPE (SABS approved & company brand/logo 2. No LTI may be incurred, unless it's proven beyond reasonable doubt (during investigation) that there was no form of negligence nor unsafe behaviour. 3. No contractor should contribute to another contractors' LTI 4. Use of substandard tools/equipment or any form of machinery i.e., non-road worthy vehicles, uncalibrated tools, etc	1. %5 of the task order value 2. Two (2) or more safety incidents - 5% of the task order value will be charged 3. 5% of the task order value will be charged from the defaulting contractor 4. Remove (tools/ equipment or any form of machinery) from site until defects have been corrected.	2.Limited to a maximum of 5 safety incidents - Removal of contractor on site 3.Limited to a maximum of 15% of the task order value.
Fire Risk Management 1. Vandalism of fire equipment (Fire extinguisher, fire hose reel, fire hoses) 2. Vandalism of the Fire alarm, fire detector and/or sprinkler system	1. Replace the vandalised equipment. 2. Minimum of 5% of the task order value	

The *Employer*, or any person appointed by the *Employer*, may, at any stage during the duration of this contract:

- conduct health and safety audits regarding all aspects of compliance with the SHEQ Requirements, at any off-site place of work, or the site establishment of the *Contractor*. refuse any employee, Sub *Contractor*, or agent of the *Contractor* access to the premises if such person has been found to commit an unsafe act or any unsafe working practice or is found not to be qualified or authorised in terms of the SHEQ Requirements.
- issue the *Contractor* with a stop order should the *Employer* become aware of any unsafe working procedure or condition or any non-compliance with any provision of the SHEQ Requirements.
- The *Contractor* immediately reports any disabling injury as well as any threat to health or safety of which it becomes aware at the *works* or on the Site to the *Project Manager*.
- The *Contractor* undertakes not to do, or not to allow anything to be done which will contravene any of the provisions of the Act, Regulations or Safety and Operating Procedures.
- The *Contractor* appoints a person, qualified in accordance with the SHEQ Requirements, as the liaison with the Eskom Safety Officer for all matters related to health and safety, this person shall be reachable 24 hours a day.
- The *Contractor* confirms that it has been provided with sufficient written information regarding the health and safety arrangements and procedures applicable to the *works* to ensure compliance by it and all employees, agents, Sub-*Contractors*, or mandataries with the SHEQ Requirements while Providing the Works in terms of this contract. As such, the *Contractor* confirms that this contract and the relevant Eskom Regulations referred to in this contract constitute written arrangements and procedures between the *Contractor* and the *Employer* regarding health and safety for the purposes of section 37(2) of the OHSA.

- The *Contractor* agrees that the *Employer* is relieved of any and all of its responsibilities and liabilities in terms of Section 37(1) of OHSA in respect of any acts or omissions of the *Contractor*, and the *Contractor's* employees, agents, or Sub-*Contractors*, to the extent permitted by the OHSA.
- The *Contractor* hereby indemnifies the *Employer* and holds the *Employer* harmless in respect of any and all loss, costs, claims, demands, liabilities, damage, penalties or expense that may be made against the *Employer* and/or suffered or incurred by the *Employer* (as the case may be) as a result of, any failure of the *Contractor*, its employees, agents, Sub-*Contractors* and/or mandataries to comply with their obligations in terms of clause 16, and/or the failure of the *Employer* to procure the compliance by the *Contractor*, its employees, agents, Sub *Contractors* and/or mandataries with their responsibilities and/or obligations in terms of or arising from the OHSA.
- In carrying out his obligation as the mandatory to the *Employer* for this contract in terms of the National Environmental Management Act No.107 of 1998, the *Contractor* ensures that he complies with the Act when Providing the Services or using plant, materials, or equipment.

1.2 Permit to Work System

- NO work shall be carried out without a "PERMIT TO WORK"
- The *Contractor's* Responsible Person(s) must satisfy himself that all sources of possible danger are isolated. Details of the Permit to Work system can be found in the Plant Safety Regulations for Lethabo Power Station, Eskom OPR 3305. The *Contractor* must also make provision for his Authorise Supervisor(s) that is trained according to the procedure mentioned above.
- A Master Permit to Work is used on declared major outages, details can be found in local procedure LBA 00085. Permit changes are made during the dead time, if it is required by the *Contractor* that a certain supply be made available, or plant tested than this can be applied for at the Outage Management Meeting at least 1 day in advance.
- Plant with a prohibitive sign attached may only be operated by appointed Eskom personnel. Any *Contractor* employee found tampering with such plant will be permanently removed from Site.

1.3 Safety Induction Course

- All the employees of the *Contractor* must attend a safety induction course before they will be allowed to work on the Site. It is the responsibility of the *Contractor* to ensure that all employees have attended the safety induction.
- A list of employees requiring safety induction must be submitted at least 2 days in advance of arrival on site with the date and time of arrival so that the safety induction can be arranged.

1.4 IBI Awareness Techniques

- "To prevent incidents and ensure continuous improvement of Lethabo Power Stations business performance in all areas affecting safety, reliability and production, it is expected of all **CONTRACTORS** service personnel, to attend a three(3) hour training session on Integrated Business Improvement Awareness, which has to be done as soon as work has commenced; This is to ensure familiarisation and use of error-prevention tools/techniques inclusive of, Pre and Post-job briefs, Risk Assessments, Self-checks(STAR principle), Job observations, Effective communications e.g.3-way, Questioning attitude, Procedural adherence, Hand overs and other related topics.
- A monthly IBI scorecard to be completed indicating the use of error prevention tools/ techniques; The assigned employee fulfilling the role of IBI representative has to attend the IBI representative's forum fortnightly, on Tuesdays, duration one hour.
- An IBI representative appointed by the *Contractor*/Supplier/Consultant to attend the IBI Representative Forum One (1) hour every Tuesday (forth nightly).
- IBI Awareness training will be provided by Lethabo Power Station personnel, free of charge, course bookings can be arranged by contacting Rabie Heymans on extension 5094".

1.5 Transportation of passengers: open LDV's:

No Eskom employee or Contractor would be allowed to transport passengers on the back of open light delivery vehicles (LDV's).

It is a legal requirement to provide safe transportation of *Eskom* and *Contractor* employees – therefore the following will be enforced:

- All passengers must be transported in a closed vehicle with proper and adequate seating, fitted with safety belt for the number of passengers to be transported. NO passengers may be transported on the back of a light delivery vehicle (LDV) whether open or closed.
- Tools and equipment must be properly secured.
- Only authorised drivers may transport passengers.
- Proof must be submitted on request in terms of valid roadworthiness of the vehicle/s.
- The above must apply to on site and off-site transportation of passengers.

1.6 Eskom Life Saving Rules:

Five Life-saving Rules have been developed that will apply to all Eskom employees, agents, consultants, and *Contractors*.

- **Rule 1:** Open, Isolate, Test, Earth, Bond, and/or Insulate before touch - that is any plant operating above 1 000 V.
 - **Rule 2:** Hook up at heights - no person may work at height where there is a risk of falling.
 - **Rule 3:** Buckle up – no person may drive any vehicle on Eskom business and/or on Eskom premises: unless the driver and all passengers are wearing seat belts.
 - **Rule 4:** Be sober (no person is allowed to work under the influence of drugs and alcohol.
 - **Rule 5:** Use a permit to work – where an authorization limitation exists, no person shall work without the required permit to work.
 - **Additional:** Texting and talking on the cell phone while driving or walking is prohibited.

1.7 Local Safety Procedures

- The *Contractor* adheres to all local procedures. A list of local procedures is available on request from the *Employer*.

1.8 Incidents / Accidents

- Incidents and accidents must be reported and investigated as detailed in LBA 00030. All incidents must also be reported to the *Employer* within 24 hours.
- First aid must be made available either by the *Contractor* or use can be made of the Lethabo medical centre at a fee. The availability of the *Contractor's* own first aid does not relieve the *Contractor* of his obligation to report and investigate the incident in accordance with Lethabo Procedure.

1.9 Fire Prevention

- Fire prevention and protection requirements to which *Contractors* must comply are detailed in LBA 00030.

1.10 Protective Equipment and Clothing

- The *Contractor* supplies his own personal protective equipment necessary to carry out the *works* and the *Contractor* shall ensure that all overalls for his staff have clearly identifying **company LOGO's**
- The *Contractor* is also responsible to inspect and maintain such equipment as required in terms of the OHS Act and local procedures.

1.11 Inspection of Equipment

- The *Contractor's* equipment is inspected by an authorised Eskom employee on arrival at the site.
- The following documentation is required to accompany the equipment where applicable: copies of all test certificates and maintenance records.
- Lifting equipment and electrical equipment must be marked with a unique number, code, or colour code for identification. If the equipment is found to be in an unsatisfactory condition or if insufficient

maintenance has been carried out on the equipment, then it will not be approved for use on Site. A list of all lifting equipment and electrical equipment must be submitted to the *Employer* at least 2 days prior to the occupation date. This list must indicate the unique number and description of the equipment.

1.12 Documentation

The *Contractor* is responsible to have the following documentation available on site in accordance with LBA 00030:

- A copy of the OHS Act.
- Copies of all site accident report forms as required by the OHS Act.
- Copies of minutes of health and safety meetings held on site.
- Copies of inspection reports produced by the accident prevention officer

1.13 Environmental Policy and Waste Handling

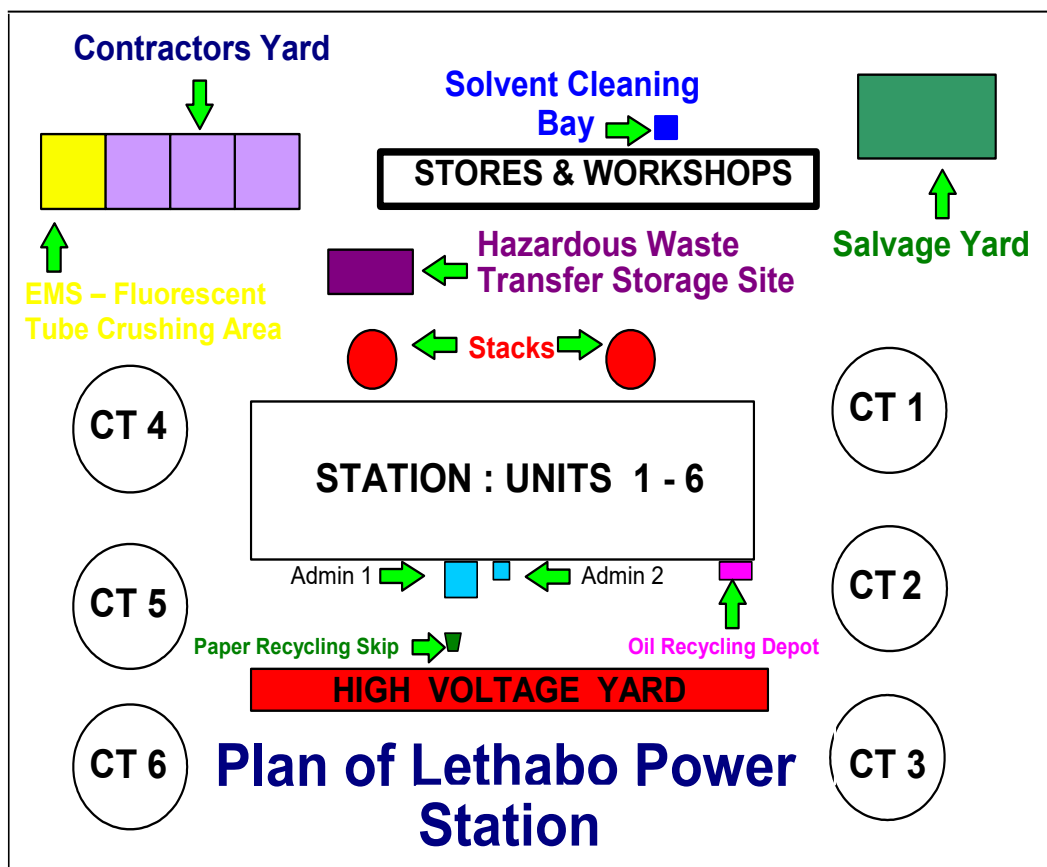
Lethabo Environmental Statement of commitment must be adhered to.

The contractor shall submit to Eskom an EMP to be reviewed and approved by Eskom environmental officer, one week before the commencement of *works*.

1.14 Disposal of Waste

Waste shall be removed promptly to the designated disposal area. No stockpiling will be permitted.

- Domestic waste to the white waste bins
- Production waste in the marked bins i.e., coal and ash only
- Paper and cans to their respective recycling bins
- Contact Civil Engineering for the disposal of building rubble
- Scrap metal, Wood & Rubber, Redundant Valves, Pipes, and Equipment etc. to be placed in the marked bins in the new Salvage Yard. Solvents and cloths used to the Cleaning Bay.



1.15 Hazardous Waste Disposal and Handling

- Hazardous / toxic waste includes all waste which contains elements or compounds listed as hazardous substances in terms of the Hazardous Substances Act No. 15 of 1973.
- Any *Contractor* who produces hazardous waste on site will be responsible for the safe removal of such waste to a registered Class I site by a waste removal and disposal body.
- The *Contractor* is required to produce a certificate of safe disposal in accordance with LBA 00054.
- The *Contractor* must ensure that persons handling hazardous waste have undergone suitable training and are acquainted with cleaning methods in case of a spillage.
- The *Contractor* is also responsible for the safe removal of their hazardous waste to Lethabo's Hazardous Waste Store. Other requirements for hazardous waste are detailed in LBA 00030.
- In order to ensure effective hazardous waste management, a copy of the *Contractors'* hazardous waste inventory must be supplied to the *Employer* at least 2 days prior to the occupation date.

Abbreviated list of Hazardous Materials

Acids and alkalis	Hydrocarbons	Pesticides & insecticides
Antimony and its compounds	Inorganic cyanides	Pharmaceuticals
Arsenic compounds	Inorganic compounds containing halogens	Phosphorus and its compounds
Asbestos	Inorganic compounds containing sulphur	Selenium and its compounds
Barium compounds	Laboratory chemicals	Silver compounds
Beryllium compounds	Lead compounds	Tarry & petroleum products

Biocides & Phyto pharmaceuticals	Medical wastes	Tellurium and its compounds
Boron compounds	Mercury compounds	Thallium and its compounds
Cadmium and its compounds	Nickel and its compounds	Vanadium compounds
Chromium compounds	Organic halogen compounds	Zinc compounds
Copper compounds	Paints and paint sludges	Waste with flash point < 60°C
Heterocyclic organic compounds	Peroxides, chlorates	

1.16 Plant & Materials

- The *Employer* may at his own discretion, supply any Plant and Materials as may be required by the *Contractor* to Provide the Works.
- The *Contractor* is to notify the *Employer* in writing, 48 hrs in advance, of such Plant and Materials required.

1.17 Access to and Departure from the Site:

- The Site is at Lethabo Power Station situated ± 18 km South of Vereeniging on the Viljoensdrift - Deneysville Road, Free State. Access to the site will be via the main security gate only. The *Employer* informs the *Contractor* of the access procedures, and it should be expected that such procedures may change depending on the prevailing security situation.
- The *Contractor* allows in his price and program for delays at the security gate. The *Employer* reserves the right for its Security personnel to search persons or vehicles entering or leaving the premises. This includes but is not limited to briefcases and toolboxes.

1.18 Temporary Gate Permits

- The *Contractor* provides the *Employer* with the personal details of their staff at least two days prior to the occupation date. All names and details to be submitted to the *Employer* who arranges for all gate permits.

1.19 Equipment or Material Access and Removal

Access

- The *Contractor* ensures that all equipment and materials brought through the security gate is signed in at the main security gate on an OV18 form.

Removal

- The *Contractor* is not allowed to remove any equipment or materials from site without producing the relevant OV18 forms or the equipment lists.
- If the equipment or material is to be removed the same day, on which they were brought on to site, then the OV18 form will need to be produced at the gate when leaving the site.
- If the equipment or material is removed after this time then a Non-Returnable Gate Release will be provided by the *Project Manager*, on receipt of the original OV18, with which the *Contractor* brought the equipment on site.
- *Contractor* to provide his own scaffolding.

1.20 Site or Area Establishment and Evacuation

Application for Site Establishment:

- Sites are allocated according to availability, the period for which the *Contractor* is going to be on site, or if special circumstances warrant the allocation of a site. Documentation to support this application can be submitted.
- The location of the site or area is indicated during the site or area take-over inspection.

Site Establishment:

- The *Contractor* does not occupy any site or area other than that allocated to him.
- The *Contractor* does not occupy the site or area prior to the take-over inspection.
- The *Contractor* maintains the site or area provided to him to the satisfaction of the *Employer*.
- The *Employer* subjects the *Contractor's* site or area to periodic inspection.

Site Evacuation:

- The *Contractor* advises the *Employer* in writing, five (5) days in advance of evacuation in accordance with LBA 00030. Immediately prior to evacuation the necessary take-over inspection must take place.

1.21 Electrical Equipment / Appliances, Lighting and Power:

- Any electrical equipment or appliances used by the *Contractor* must comply with all relevant safety regulations and requirements as detailed in LBA 00030 and be maintained in safe and proper working condition.
- The *Employer* has the right to stop the *Contractor's* use of any electrical equipment or appliance, which in the *Employer's* opinion does not conform to the foregoing.
- The *Contractor* provides at his own expense any temporary local lighting and ensures that it is in accordance with the requirements of the Factories Inspector.
- The *Contractor* provides at his own expense, all temporary wiring and cabling to route power from the point of supply to the various points where it is required, maintain same and remove on completion.

1.22 Water

- The *Contractor* provides at his own cost, all connection fittings, pipework, temporary plumbing, and pumps necessary to lead the water from the point of supply to the various points where it is required, maintain same and remove on completion.
- Such fittings must be compatible with the *Employer's* fittings so that galvanic corrosion of pipework is prevented
- Water wastage due to un-maintained pipe work or fittings provided by the *Contractor* will be calculated and will be for the cost of the *Contractor*.

1.23 Compressed Air

- The *Contractor* provides at his own cost, all connection fittings and pipe-work necessary to lead the compressed air from the point of supply to the various points where it is required, maintain same and remove on completion. Such fittings must be compatible with the *Employer's* fittings so that galvanic corrosion of pipework is prevented
- Compressed air wastage due to un-maintained pipe work or fittings provided by the *Contractor* will be calculated and will be for the cost of the *Contractor*.

1.24 Ventilation

- The *Contractor* is responsible for adequate ventilation of the *works*.

1.25 Security

- The *Contractor* is responsible for all security on *site*, fencing off, night watch and access control to secure all plant, materials, and the *works* itself. All these measures must be in accordance with any relevant regulations and standards and subject to the *Employer's* approval.

- It is also the *Contractors* responsibility to ensure the security of all completed portions of the *works* prior to Completion.

1.26 Offices, Workshops and Stores

- The *Contractor* shall provide, erect, and maintain for his own use, any additional office accommodation and stores he requires, together with drainage, lighting, heating, and hot and cold-water services as required.
- The *Contractor's* site establishment price includes all treatment of the site that he considers necessary for his entire operation throughout his period of occupation and under all weather conditions.
- The *Contractor* also includes for all security and access arrangements that he considers necessary.

1.27 Sanitary Facilities

- The *Contractor* shall provide service, maintain, and remove on completion any additional facilities required and allow for it in his *Price*.
- The *Contractor's* employees who work with asbestos are not allowed to use the *Employer's* ablution or messing facilities at the workplace during and after stripping of lagging materials, for fibres that may be attached to workers clothing, or to any other article.