



NEC3 Term Service Contract (TSC3)

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

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

for Provision of Technical Facilities Management
Services to Eskom Real Estate (ERE) Eskom
Academy of Learning

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Tender No. E1379CXCTS

PART C1: AGREEMENTS & CONTRACT DATA

Contents:	No of pages
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[to be inserted from Returnable Documents at award stage]	
C1.2a Contract Data provided by the <i>Employer</i>	[•]
C1.2b Contract Data provided by the <i>Contractor</i>	[•]
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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 Technical Facilities Management Services to Eskom Real Estate (ERE) Eskom Academy of Learning

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

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

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

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

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

Acceptance

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

The terms of the contract, are contained in:

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

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

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

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

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

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

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

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	N/A	

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

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

For the tenderer:

For the Employer

Signature

Name

Capacity

On behalf
of

(Insert name and address of organisation)

(Insert name and address of organisation)

Name &
signature
of witness

Date

C1.2 TSC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	General	
	The <i>conditions of contract</i> are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	W1: Dispute resolution procedure
	and secondary Options	
		X1: Price adjustment for inflation
		X2: Changes in the law
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: Additional conditions of contract
	of the NEC3 Term Service Contract April 2013 ² (TSC3)	
10.1	The <i>Employer</i> is (name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel No.	011 800 800
10.1	The <i>Service Manager</i> is (name):	Daniel Njana
	Address	Megawatt Park, Maxwell Drive, Sandton, Johannesburg
	Tel	011 800 2486
	e-mail	njanadt@eskom.co.za
11.2(2)	The Affected Property is	Megawatt Park
11.2(13)	The <i>service</i> is	Provision of Technical Facilities Management Services to Eskom Real Estate (ERE) Eskom Academy of Learning

² Available from Engineering Contract Strategies Tel 011 803 3008 Fax 086 539 1902 www.ecs.co.za

11.2(14)	The following matters will be included in the Risk Register	Refer to the Risk Register
11.2(15)	The Service Information is in	Part 3: Scope of Work and all documents and drawings to which it makes reference.
12.2	The <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	1 week
2	The Contractor's main responsibilities	Data required by this section of the core clauses is also provided by the <i>Contractor</i> in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data
21.1	The <i>Contractor</i> submits a first plan for acceptance within	2 weeks of the Contract Date
3	Time	
30.1	The <i>starting date</i> is.	TBC
30.1	The <i>service period</i> is	5 years
4	Testing and defects	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
5	Payment	
50.1	The <i>assessment interval</i> is	between the 15th day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand
51.2	The period within which payments are made is	8 weeks.
51.4	The <i>interest rate</i> is	<p>the publicly quoted prime rate of interest (calculated on a 365 day year) charged by from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and</p> <p>(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted <i>mutatis mutandis</i> every 6</p>

		months thereafter (and as certified, in the event of any dispute, by any manager employed in the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6	Compensation events	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
7	Use of Equipment Plant and Materials	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data
8	Risks and insurance	
80.1	These are additional <i>Employer's</i> risks	1. None
9	Termination	There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.
10	Data for main Option clause	
A	Priced contract with price list	
20.5	The <i>Contractor</i> prepares forecasts of the final total of the Prices for the whole of the <i>service</i> at intervals no longer than	2 weeks.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i>	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
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 Institution of Civil Engineers (London) (see www.ice-sa.org.za) or its successor body.
W1.4(2)	The <i>tribunal</i> is:	arbitration
W1.4(5)	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not	of the Association of Arbitrators (Southern

	state who selects an arbitrator, is	Africa) or its successor body.		
12	Data for secondary Option clauses			
X1	Price adjustment for inflation			
X1.1	The <i>base date</i> for indices is	[•].		
	The proportions used to calculate the Price Adjustment Factor are:	proportion	linked to index for	Index prepared by
		85%	Material	SEIFSA D3
		15%	non-adjustable	
		1.00		
X2	Changes in the law	There is no reference to Contract Data in this Option and terms in italics are identified elsewhere in this Contract Data.		
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 deductibles relevant to the event		
X18.3	The <i>Contractor's</i> liability for Defects due to his design of an item of Equipment is limited to	The greater of <ul style="list-style-type: none">the total of the Prices at the Contract Date andthe amounts excluded and unrecoverable from the <i>Employer's</i> insurance (other than the resulting physical damage to the <i>Employer's</i> property which is not excluded) plus the applicable deductibles		
X18.4	The <i>Contractor's</i> total liability to the <i>Employer</i> , for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	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 <ul style="list-style-type: none">Defects due to his design, plan and specification,Defects due to manufacture and fabrication outside the Affected Property,loss of or damage to property (other than the <i>Employer's</i> property, Plant and Materials),death of or injury to a person and		

		<ul style="list-style-type: none"> • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	6 months after the end of the <i>service period</i>.
X19	Task Order	
X19.5	The <i>Contractor</i> submits a Task Order programme to the <i>Service Manager</i> within	2 days of receiving the Task Order
Z	The <i>additional conditions of contract</i> are	Z1 to Z14 always apply.

Z1 Cession delegation and assignment

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

Z2 Joint ventures

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

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

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

Z4 Confidentiality

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

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

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

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

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

Z8 Notifying compensation events

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

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

Z9 *Employer's* limitation of liability

- Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)
- Z9.2 The *Contractor's* entitlement under the indemnity in 82.1 is provided for in 60.1(12) and the *Employer's* liability under the indemnity is limited to compensation as provided for in core clause 63 and X19.11 if Option X19 Task Order applies to this contract.

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

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

Z11 Ethics

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

- Affected Party** means, as the context requires, any party, irrespective of whether it is the *Contractor* 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 *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractors or the Subcontractor's employees,
- Corrupt Action** means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

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

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

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

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

Z11.2 The *Employer* may terminate the *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.

Z11.3 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.

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

Z12 Insurance

Z 12 .1 Replace core clause 83 with the following:

Insurance cover 83

- 83.1 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.
- 83.2 The *Contractor* provides the insurances stated in the Insurance Table A from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity
Loss of or damage caused by the <i>Contractor</i> to the <i>Employer's</i> property	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 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	The replacement cost where not covered by the

Equipment	<p><i>Employer's insurance.</i></p> <p>The <i>Employer's</i> policy deductible as at Contract Date, where covered by the <i>Employer's</i> insurance.</p>
The <i>Contractor's</i> liability for loss of or damage to property (except the <i>Employer's</i> property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising from or in connection with the <i>Contractor's</i> Providing the Service	<p><u>Loss of or damage to property</u> The replacement cost</p> <p><u>Bodily injury to or death of a person</u> The amount required by the applicable law.</p>
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 12.2 Replace core clause 86 with the following:

**Insurance
by the
Employer**

86

86.1 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
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Z13 Nuclear Liability

- Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.
- Z13.2 The *Employer* is solely responsible for and indemnifies the *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*.
- Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *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*.
- Z13.4 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.
- Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 Asbestos

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

AAIA	means approved asbestos inspection authority.
ACM	means asbestos containing materials.
AL	means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
Ambient Air	means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
Compliance Monitoring	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the <i>Employer's</i> Asbestos Standard 32-303: Requirements for Safe Processing,

Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

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

- Z14.1 The *Employer* ensures that the Ambient Air in the area where the *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.
- Z14.2 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 Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.
- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z14.5 The *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.
- Z14.6 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.
- Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

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

PART 2: PRICING DATA
TSC3 Option A

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

C2.1 Pricing assumptions: Option A

How work is priced and assessed for payment

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

Identified and defined terms	11	
	11.2	(12) The Price List is the <i>price list</i> unless later changed in accordance with this contract.
		(17) The Price for Services Provided to Date is the total of <ul style="list-style-type: none">the Price for each lump sum item in the Price List which the <i>Contractor</i> has completed andwhere a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the <i>Contractor</i> has completed by the rate.
		(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

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

Function of the Price List

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

Link to the *Contractor's* plan

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

Preparing the *price list*

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

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

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

work within that item later turns out to be different to that which the *Contractor* estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

Format of the *price list*

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

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

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

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

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

C2.2 the *price list*

Refer to the Bill of Quantities Attached.

The total of the Prices

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Service Information</i>	36
	Total number of pages	37

Contents

Part 3: Scope of Work	4
1 Description of the <i>service</i>	vi
2 Management strategy and start up.	xxxi
3 Health and safety, the environment and quality assurance	xxxiii
4 Procurement	xxxiv
5 Working on the Affected Property	xxxvi
6 List of drawings	xxxviii

1 Description of the service

1.1 Executive overview

The purpose of this contract is to appoint a suitable qualified *Contractor* for the Provision of Technical Facilities Management Services to Eskom Real Estate (ERE) Eskom Academy of Learning Offices located at No. 100 Dale Road, Glen Austin, Midrand. The Gross Floor Area of the Eskom Academy of Learning buildings is 76172 m².

1.2 Employer's requirements for the service

The scope includes the provision of the following facilities management services:

- Building management services
- Heating and Ventilation Air Conditioning System
- Plumbing and Drainage
- Civil works and Mechanical
- Electrical and UPS System
- Fire Protection & Sprinkler System
- Waste Water Treatment and Sewage System
- Transformers LV and HV Services
- Building Services
- Helpdesk Services
- Water Analysis

The *Contractor* shall provide all labour, supervision, administration and management, equipment, tools, supplies and material required to perform the facilities management services specified herein.

1.3 Detailed description of the service

Fire Dampers Testing

Bi-annual and after any double knock fire event Service

All the Fire Dampers shall be tested to ensure correct operation during an emergency. Activate from BMS. The Contractor shall be required to reset all the Fire Dampers after the test have been completed and ensure that all did reset. Prior arrangements to carry out these tests will be required from the Employer's Representative.

Fire Dampers Service

Annual Service

Fire Dampers shall be serviced as all related equipment/accessories to ensure the smooth and faultless operation of the Fire Dampers in the event of emergency. Equipment/Accessories will include the fire damper, links, limit switches, relays, all cabling, wiring and termination points etc.

Fire Dampers Ad Hoc Testing

As and when required Service

Testing as may be determined by unplanned events. Reset after Emergency Application or Activation of the Fire Dampers. Ensure all fire dampers returned to normal position

1.3.1 Heating and Ventilation Air Conditioning System

Operations

General plant operation, BMS monitoring, temperature adjustments and minor repairs and or switching between pumps and chillers etc.

Domestic air conditioning units (window-, console-, split units)

The basic requirement listed below must be carried out as and when required
Consisting of:-

- Minor service: 3 times per annum
- Check and clean filter – replace if torn or damaged
- Check and clear condensate drains to prevent internal leaks
- Clean equipment in general, blow out dust from condenser with blower and observe air-conditioner operation in all its functions
- Check amperage readings on cooling/heating and fan only operation and compare to nameplate ratings

Major Service: Once per annum

- Check and clean filter – replace if torn or damaged
- Check condition of evaporator coil and clean/wash. Straighten fins with fin comb where necessary
- Check condition of condenser coil and clean/wash. Straighten fins with fin comb where necessary
- Check condensate drip trays and treat for corrosion if necessary
- Check condensate drains and clear if necessary to prevent internal leaks
- Check condensate drain pumps are in order
- Check fan blades to ensure they are secured to fan shafts, aligned/balanced and not damaged
- Check fan motors to ensure they are running freely, bearings are fine and oil where applicable. Ensure baffle plates are secured between in and outlet air
- Check compressor is operating correctly, that klixon is operating correctly and that compressor is suspended freely.
- Check and eliminate vibrations
- Check thermostats, switches, contactors, capacitors and wiring to ensure that all electrical connections are secure and clean (blow out dust with blower) - no burnt or hot connections and no insulation damage – repair where necessary
- Check refrigerant system for leaks and repair where necessary
- Clean equipment in general and observe its operation in all its functions
- Check amperage readings on cooling/heating and fan only operation and compare to nameplate ratings
- For split units: do the above points plus:
- Check and tighten/repair all refrigerant pipe fittings
- Check head and suction pressures to ensure it is according to specifications, otherwise adjust gas to required pressures
- Take corrective action for all above points where necessary

Central air conditioning system

Chillers - check the following basic requirements. Services to be done by OEM

Plantroom 1: 2 x Trane Screw Chillers. Type: RTHC C1, 209KW –R 134 a

Plantroom 6: 2 x Trane Screw Chillers. Type: RTHC B1, 145KW – R 134 a

LDC: 1 X Trane Chiller: Type: ECGWN206BA2E11DCXXXXXXBXXXXXXXAXXAAXXXXX, C1 42KW, C2 42KW –R 410 A (Scroll compressors)

Monthly Service: x11 Check, repair and record the following:

- Safety valves and devices for correct operation and those valves are not blocked or leaking.
- Ensure Chiller installations conform to all the manufacturer's requirements.
- All parameters to be checked to ensure that the installation is in a good condition.
- That there is no oil, frost or humidity under insulating materials and repair insulating materials where necessary.
- Check that there are no vibrations or unusual noises.
- Operating temperatures and pressures on evaporators and condensers, to ensure permissible limits are not exceeded.
- Evaporator pressure drop
- Line and control voltages
- Motor Amperages and Electrical connections.
- Compressor motor windings's resistances, between windings and to earth.
- Open and check all contactors and all wiring for loose and burned connections.
- Operation of all temperature safety controls (sensors).
- Operation of all pressure safety controls (HP, LP and Oil differential).
- Operation of all electrical safety controls (Overloads, CT's).
- Operation of the control circuitry.
- Operation of the Microprocessors and programmed parameters.
- Evaluate fouling conditions in the evaporators and condensers.
- Oil flow and level, pressure drop across oil filter and refrigerant charge.
- Check for tell-tale refrigerant leaks and test all piping and components for refrigerant leaks.
- Loading and unloading of systems for correct operation.
- All solenoid valves for condition (cracks, leaks, etc.) and operation.
- Condition and positions of oil shut off valves.
- Evaluate fouling of the oil and refrigerant filters and drier cores.
- Correct chilled water flow against pressure drop chart.
- Correct condensed water flow, pressure drop and control valve operation.
- Correct condensed water entering and leaving temperatures.
- Correct operation of chilled and condensed water flow switches.
- Discharge superheat, liquid sub cooling and evaluate refrigerant charge.
- Refrigerant approach temperatures in the evaporators and condensers.
- Entering and leaving chilled water temperatures.
- Operation of expansion valves.
- Compressors start and run hours.
- On completion, supply full maintenance report and log sheet for each chiller

Annual Service Check, repair and record the following:

- Safety valves and devices for correct operation and those valves are not blocked or leaking.
- Ensure Chiller installations conform to all the manufacturer's requirements.
- All parameters to ensure that the installation is in a good condition.
- Check that there is no oil, frost or humidity under insulating materials and repair insulating materials where necessary.
- Check that there are no vibrations or unusual noises.
- Operating temperatures and pressures on evaporators and condensers, to ensure permissible limits are not exceeded.
- Evaporator pressure drop.
- Line and control voltages.
- Motor Amperages and Electrical connections.
- Compressor motor windings' resistances, between windings and to earth.
- Open and check all contactors and all wiring for loose and burned connections.
- Operation of all temperature safety controls (sensors).
- Operation of all pressure safety controls (HP, LP and Oil differential).
- Operation of all electrical safety controls (Overloads, CT's).
- Operation of the control circuitry.

- Operation of the Microprocessors and programmed parameters.
- Evaluate fouling conditions in the evaporators and condensers.
- Oil flow and level, pressure drop across the oil filter and refrigerant charge.
- Check for tell-tale refrigerant leaks and test all piping and components for refrigerant leaks.
- Compressor loading and unloading mechanisms for correct system operation.
- Compressor discharge check valve.
- All solenoid valves for condition (cracks, leaks, etc.) and operation.
- Condition and positions of oil shut off valves.
- Evaluate fouling of the oil and refrigerant filters and drier cores.
- Correct chilled water flow against pressure drop chart.
- Correct condensed water flow, pressure drop and control valve operation.
- Correct condensed water entering and leaving temperatures.
- Correct operation of chilled and condensed water flow switches.
- Discharge superheat, liquid sub cooling and evaluate refrigerant charge.
- Refrigerant approach temperatures in the evaporators and condensers.
- Entering and leaving chilled water temperatures.
- Operation of expansion valves.
- Compressors start and run hours.
- Do oil analysis with spectrograph by a qualified laboratory.
- Change oil if necessary, depending on report.
- Change oil filters.
- Change refrigerant drier cores.
- Clean condenser (Chemical clean and brush.)
- Clean evaporator if necessary.
- Clean chilled and condensed water strainers.
- Clean and repaint any areas that show signs of corrosion.
- On completion, supply full maintenance report and log sheet for each chiller.

Chilled water make up and expansion tank Plantroom 1A – Abeco, size 0.8 x 0.8 x 1m

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary
- Chilled water make up and expansion tank Plantroom 6 – Abeco, size 1.2 x 1.2 x 1.2 m

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary

Air Handling Units

Monthly service

- Check drains and unblock
- Cleaning of plant rooms – floors and equipment
- Motor and fan holding down bolts and spring mountings, check for tightness and security
- Heating and cooling coils, check for physical damage and comb fins where necessary

Quarterly Service

- Heating and cooling coils, pressure clean with approved chemical agent
- Check and clean condensate drain pans and pipe work
- Check and lubricate damper and vortex damper mechanisms

Annual Service

- Pressure wash inside of entire unit
- Check door seals and repair/replace
- Check for corrosion and treat
- Check all main- and re-heater-/ diffuser heater banks(approximately 200)
- Control Panels, (Main electrical boards in each Plantroom)

Quarterly Service

- Clean interior of enclosures
- Check access door seals and fittings

6 Monthly Service

- Check cable ways and secure cabling, covers, etc
- Check cable loops to doors for scuffing
- Check contactors

Annual Service

- Check all connections for tightness and repair hot connections
- Check labels and terminal numbers according to drawings
- Calibrate Volt- and Ammeters
- Check all CT's and VT's
- Check overload operation and set points
- Check equipment amperages
- Check insulation resistance
- Clean equipment
- Check earth impedance
- Take infrared photographs on all major panels and take corrective action
- Check all circuit breakers, isolators, fuses and fuse holders, pilot lights and electrical wiring from main isolator

Boilers - Abeco Engineering

Plantroom1- 2x32 cubic meters Boilers. Models: SAB 0028 and OO29

Plantroom6 – 2x28 cubic meters Boilers. Models: SAB 0042 and 0043

6 monthly Service

- General - visual inspection on boilers for condition of pressure gauges, thermometers, hot water circulation pumps, safety relief valves, overheat stats and leaks.
- Check, operate and grease manual valves.
- Element inspections and repairs – replace faulty elements and repair wiring where necessary
- Plantroom 1, Boiler 1 – 36 x 5000 Watt Ceramic Withdrawable electric elements, 46mmOD, length 920mm, 220V
- Plantroom 1, Boiler 2 – 36 x 5000 Watt Ceramic Withdrawable electric elements, 46mmOD, length 920mm, 220V
- Plantroom 6, Boiler 1 – 36 x 4500 Watt Ceramic Withdrawable electric elements, 46mmOD, length 920mm, 220V
- Plantroom 6, Boiler 2 – 36 x 4500 Watt Ceramic Withdrawable electric elements, 46mmOD, length 920mm, 220V
- Check wiring for loose or hot connections and proper earthing and repair
- Check Amperage and resistance on all elements and replace faulty elements

Hot water make up and expansion tank Plantroom 1A – Abeco, size 0.8 x 0.8 x 1m

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary

Hot water make up and expansion tank Plantroom 6 – Abeco, size 1.2 x 1.2 x 1.2 m

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary

Hot water open expansion vessel Plantroom 1 – Abeco, size 1.8m deursnee x 3.1m height

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary
- Check and repair sight glasses/level indicators and valves where necessary

Hot water open expansion vessel Plantroom 6 – Abeco, size 1.5m Deursnee x 3.1m height

6 monthly Service

- Check general condition of tank and pipe work for any leaks
- Check all gate valves and ball valve and repair where necessary
- Check and repair sight glasses/level indicators and valves where necessary

Hot water closed expansion vessel Plantroom 1 – size 1.08m Deursnee x 1.6m height (500L)

6 monthly Service

- Check general condition of tank pressure gauges and pipe work for any leaks
- Water pressure to be between 380 and 420 Kpa
- Check bladder pressure and top up with Nitrogen to correct pressure as per supplier specifications
- Check all gate valves and repair where necessary

Hot water closed expansion vessel Plantroom 6 – size 1.08m Deursnee x 1.6m height (500L)

6 monthly Service

- Check general condition of tank pressure gauges and pipe work for any leaks
- Water pressure to be between 380 and 420 Kpa
- Check bladder pressure and top up with Nitrogen to correct pressure as per supplier specifications
- Check all gate valves and repair where necessary

Heat Exchangers x 2

Plantroom 1 – Make: Alva Laval. Type: P22-VBL

Plantroom 6 – Make: Alva Laval. Type: P22-VBL

6 Monthly

- Check general condition for leaks
- Check pressure gauges and thermometers and replace where necessary
- Check, operate and grease manual valves

3 Yearly

- Pressure vessel testing for statutory compliance - By Accredited Supplier

Pumps

- P1 Chilled water pumps x 3. Make: Matheson and Bremmer. Type : End suction. Model: NE 100/315
- P1 Condenser water pumps x 4. Make: Matheson and Bremmer. Type : End suction. Model: NE 125/315
- P1 Primary hot water pumps x 2. Make: Circle Pumps. Type : End suction. Model: CBS 40/20
- P1 Secondary hot water pumps x 2. Make: Matheson and Bremmer. Type : End suction. Model: NE 65/315
- P1 Mechanical seal pumps x 1. Make: Calpeda. Type : End suction Mono. Model: NM 20/125
- P1 Pressurisation Storage pumps x 2. Make: Breamer P. Type : End suction. Model: SAW 4/300
- P1 Circulation Hot Water pumps x 2. Make: Grundfos. Type : Closed couple. Model: CM10-2 A-R-G-E-AQQE
- P6 Chilled water pumps x 3. Make: Matheson and Bremmer. Type : End suction. Model: NE 100/400
- P6 Condenser water pumps x 4. Make: Matheson and Bremmer. Type : End suction. Model: NE 80/250
- P6 Primary hot water pumps x 2. Make: Circle Pumps. Type : End suction. Model: CBS 40/20
- P6 Secondary hot water pumps x 2. Make: Matheson and Bremmer. Type : End suction. Model: NE 65/315
- P6 Mechanical seal pumps x 1. Make: Calpeda. Type : End suction Mono. Model: NM 20/125
- P6 Pressurisation Storage pumps x 2. Make: Breamer P. Type : End suction. Model: SAW 4/300
- P6 Circulation Hot Water pumps x 2. Make: Grundfos. Type : Closed couple. Model: CM10-2 A-R-G-E-AQQE
- LDC Chilled water pumps x 3. Make: Rapid Allweiler-Isando. Type : NT 65/315
- LDC Condenser water pumps x 4. Rapid Allweiler-Isando. Type : NT - 80/251

Check the following: By accredited pump supplier/OEM

Monthly

- Noise and vibration levels, leaks and general condition
- Pump and motor alignment and flexible coupling conditions
- Bearing temperatures on pumps and motors and lubrication
- Check all temperature and pressure gauges and replace where necessary
- From above inspections advice on corrective action for bearing or shaft seal or flexible coupling replacements, etc.

Annually

- Check, repair and grease all mechanical valves and non-return valves
- Clean all pump strainers

Electric motors

3 Monthly Service

- Check that earthing of motor through conduit or cable armouring is secure
- Check that motor terminal cover is secure
- Check bearings while running and report on condition

6 Monthly Service

- Blow out motor
- Grease motor bearings if grease nipples are fitted
- Blow out starter panel
- Check motor and starter terminals for tightness and condition
- Operate and check overloads where possible and check overload setting for correctness

Cooling Towers

P1: 2 X Baltimore Aircoil. Models: VTO 0412-02M

P6: 2 X Baltimore Aircoil. Models: VXT 120 C

LDC: Industrial Cooling Towers. Model: ICT 1550 (Fan 960F, 2.2Kw motor)

Check the following:

Weekly

- Water treatment (See specification below)
- Check and fill up oil on centre bearings
- Check v-belts
- Check bearings for noise, vibration and temperature

Monthly Service

- Check for leaks and repair/report
- Check VSD operation
- Check general condition of tower
- Clean surroundings/yard from papers, weeds, etc

Quarterly Service

- Fan motor operation
- Oil/grease plunger blocks on fan shafts
- Drain tower and clean out, clean strainer
- Check and adjust ball valves if necessary

6 Monthly

- Blow out motor
- Grease motor bearings if grease nipples are fitted
- Blow out starter panel
- Check motor and starter terminals for tightness and condition
- Operate and check overloads where possible and check overload setting for correctness, Voltages and Amps

Annually:

- Include monthly, 3 monthly and 6 monthly inspections
- Check eliminators and spray nozzles condition and clean
- Check for cracks on the tower
- Check and treat corrosion
- Take corrective action on all the above

Air-Compressors

Monthly Service

- Check compressor oil level
- V-Belt wear and tension
- Air-filters
- Noise and vibration
- Compressor cycling controls
- Receiver tank relief valve operation
- Drain receiver tank
- Clean components
- Check that earthing of motor through conduit or cable armouring is secure

- Check that motor terminal cover is secure
- Check bearings while running and report on condition

6 Monthly Service

- Blow out motor
- Grease motor bearings if grease nipples are fitted
- Blow out starter panel
- Check motor and starter terminals for tightness and condition
- Operate and check overloads where possible and check overload setting for correctness

3 Yearly

- Pressure vessel testing for statutory compliancy – By Accredited Supplier

Water treatment

Weekly: Inspections

6 Monthly – Legionella tests

The scope would include but will not be limited to the following specifications:

Responsibilities of the Water Treatment Supplier:

Take control of all the aspects of the HVAC water treatment program and supply all the water treatment chemicals in order to prevent Scale, Corrosion Deposits, Bio-Fouling and diseases, as follows:

- Weekly site visits are required to monitor systems and take corrective action and to do dosage on all the systems as required.
- Do full analytical tests on each system with a detailed report on action taken to be submitted to EAL's Eskom Representative on a weekly basis. Reports to state: Parameters and current values for all areas regarding pH, Alkalinity, Calcium, TDS and chemical concentration factors, action taken and general conditions.
- Legionella analysis to be carried out twice per year (October and April) on all air handling units and cooling towers and certification on findings observed to be sent to EAL's Eskom Representative. All positive results must be managed by the Water Treatment Supplier until the systems are tested negative.
- Ensure client is kept up to date on system conditions, and report any deviations immediately to EAL's Eskom Representative.
- Supply all necessary chemicals required in order to prevent scale, corrosion, bio-fouling and diseases in the specified systems.
- Ensure all chemical supply containers have sufficient chemicals.
- Ensure all dosage units are in working order.
- Ensure all bleeding systems are controlled at the correct total dissolved solids values.
- Ensure dosage of all closed systems.
- Setting of all control equipment according to water analysis results.
- Ensure all analysis ratios are correct, with corrective action, if required.
- Abide by the guidelines as detailed in risk management.
- Safety Data Sheets to be provided for all Chemicals used on site and should be displayed at all dosing points/containers.

Systems to be treated

Open Evaporative Cooling Towers

- P1 - Two systems.
- P6 - Two systems

- LDC –One system

Closed Chiller Units

- P1, P6 and LDC systems

Closed Hot water systems

- P1 and P6 systems.

Air-Handling Units - Sumps for Air-Washers in:

- P3 Internal and P3 perimeter zones.
- P4 Internal and P4 perimeter zones.
- P8.

Chemical specifications and parameters

- Cooling Towers – Chemicals to prevent scale and corrosion must have the ability to remove old scale deposits with constant use over extended periods. No chromates to be used in corrosion control. Bacterial control to prevent Legionella growth: No oxidising biocides to be used in the control of biological proliferation.
- Air Handling Units - Chemicals to prevent scale and corrosion must have the ability to remove old scale deposits with constant use over extended periods. No chromates to be used in corrosion control. Bacterial control to prevent Legionella growth: No oxidising biocides to be used in the control of biological proliferation. Care has to be taken that all chemicals used will not react and release smells or gasses in the air ducts.
- Chiller Systems - Chemicals to prevent corrosion and bio-fouling in closed chiller systems. No chromates or heavy metals to be used in the systems.
- Closed Hot Water Systems - Chemicals to prevent scale and corrosion. No chromates to be used. Chemical must ensure adequate oxygen absorption surface coating and alkalinity control.

Filtration by OEM (Patent holder)

Monthly

Clean-Air Filter services at EAL

The scope would include but will not be limited to the following specifications:

- The filters of the Central plants (ducted systems) need to be maintained monthly by means of a good quality “clean air” program to ensure that Safety, Health and Environment standards are maintained.
- The filters and surrounding areas (filter mounting panels and floors) must be cleaned at least monthly but as frequently as necessary to ensure clean air at all times, taking in consideration winter and summer conditions, etc.
- The filter Supplier will keep filter bank areas clean, including the floors in the immediate filter areas, to ensure cleanliness at all times.
- Mounting frames and seals need to be kept in a good condition to ensure that no filter by-pass occurs.
- The manometers and related equipment, measuring the pressure drop across the filters, must be maintained. (Repaired or replaced when necessary.)
- Any damaged filters must be replaced immediately, on an as and when required basis.
- The replacing and repairing of faulty filters and manometers (including their ink/oil), filter bank seals, cleaning materials and all other labour, material and travelling costs should be included in the fixed monthly costs.
- An efficiency level of 95% and above needs to be maintained at all times and filters need to be replaced when efficiency drops below 95% @ 5um.
- Certification of efficiency levels for all the filters needs to be supplied to Eskom on request.

- No storage facilities will be provided by EAL.
- Dirty filters must be removed from EAL's site for cleaning.
- Cleaning of filters to be done off site under sealed and controlled conditions.
- The filters for EAL should be marked and used at EAL only and filters should be replaced with new ones after the fifth wash to ensure that filters stay rigid and efficient.
- Records of number of washes to be kept at supplier and EAL.
- Filters to be labelled for identification and tracking purposes.
- Proof of identification of filters must be produced before installation.
- No other site's filters will be accepted at EAL.
- Monthly feedback/inspection sessions to be scheduled by the filter Supplier with the Eskom Representative.
- The filter Supplier to submit a Monthly Report to Eskom, stating:
 1. The filter status in all areas, the velocity as well as the initial and final pressure drops on the manometers, before and after installation of clean filters, at all the air-handling units in the Main and Simulator buildings and LDC.
 2. Particle counts before and after all the filters banks must be done every month, before and after the filters are replaced. The results of the particle counts must be plotted on a graph in the monthly report.

Filter requirements:

- Supply Clean Air, using Conical Cell Venturi filters in Main and Simulator buildings, Colenso and LDC and Service Exchange Panel systems in other areas.
- Efficient air quality and sufficient air-flow is extremely important.
- The filter medium for CCV's should consist of nonwoven fibres and have at least 380grams of fibres per square meter, which ensures a filtration efficiency of 95-98% @ 5um.
- The filter medium for Service Exchange Panel systems should consist of nonwoven fibers, with at least 250 grams of fibre per square meter, which ensures a filtration efficiency of 80% @ 5um.
- The filters and the filter framework should be rigid to ensure that the movement of Air flow that causes a considerable amount of vibration on the filtration products, shaking holding frames and filters, will not cause the filters to offload dust particles(passing through filters) in the air supply.
- The filters must be able to absorb a great amount of dust and keep the dust in the catchment area, without bursting its seals or breaking apart.
- Proper sealing of filters in holding frames is required to prevent by-pass of unfiltered air.
- A low average pressure drop is required to save energy.
- All material to be tested according to SABS1424-1987 test standards (Ashrae 52-76).

See filter locations, types, sizes and quantities:

FILTER LOCATION, TYPES AND QUANTITIES					
PLANT ROOMS	FILTER PANEL SIZES	FILTER TYPES 1.) CCV = CONICAL CELL VENTURI WITH 4XCONE FILTERS EACH. 2.) SEPPF = SERVICE EXCHANGE PLASTIC PANEL	CCV QUANTITIES	CONE QUANTITIES	SEPPF QUANTITIES

		FILTERS.			
P1 DINING ROOM	600X600	CCV	15	60	
P1A INTERNAL ZONE	600X600	CCV	12	48	
P1A PERIMETER ZONE	600X600	CCV	16	64	
P2 CLASS ROOMS	600X600	CCV	6	24	
P2 SIMULATOR 5	600X600	CCV	6	24	
P3 INTERNAL ZONE	600X600	CCV	9	36	
P3 PERIMETER ZONE	600X600	CCV	12	48	
P4 INTERNAL ZONE	600X600	CCV	8	32	
P4 PERIMETER ZONE	600X600	CCV	12	48	
P5 CLUBHOUSE 1	600X600	CCV	6	24	
P5 CLUBHOUSE 2	600X600	CCV	6	24	
P6 AUDITORIUM	600X600	CCV	9	36	
P7 SIMULATOR 1 & 2	600X600	CCV	12	48	
P7 SIMULATOR 3 & 4	600X600	CCV	12	48	
P8 WORKSHOP	600X600	CCV	3	12	
COLENZO GROUND FLOOR PLANT	600X600	CCV	12	48	
COLENZO FIRST FLOOR PLANT	600X600	CCV	20	80	
TRANSFORMER ROOM P1	500X500X48	SEPPF			12
TRANSFORMER ROOM P6	600X600X48	SEPPF			6
PABX VENTILATION	500X500X48	SEPPF			3
MECHANICAL WORKSHOPS AND HIGHBAY	500X500X48	SEPPF			140
IAN MCREA	500X600X48	SEPPF			6
CONGELA	400X620X48	SEPPF			2
	400X500X48	SEPPF			2
KHUTALA	400X620X48	SEPPF			2
	400X500X48	SEPPF			2
SERVER ROOM G7	594X624X48	SEPPF			8
LDC AUDITORIUM	500 X 500	CCV	4	16	
LDC CLASSROOMS	500 X 500	CCV	8	32	
LDC PERIMETER ZONE	500 X 500	CCV	6	24	
LDC INTERNAL ZONE	600 X600	CCV	6	24	

BMS/CONTROLS. Type: Landis and Steafa/Siemens

BMS and Controls – Services to be done By OEM accredited agent

Monthly Service

- Advise on software upgrades to ensure communication to latest technology controllers and to prevent system from becoming outdated.
- Do system back-ups monthly of database
- Update graphics and do modifications to database when required
- Check alarm and failure reports from controls workstation and resolve problems if any and pick up sequential problems from alarm counts.
- Check BMS system workstation for correct operation and do necessary adjustments/programming
- Give problem areas/defects first priority
- Check step controllers (heaters, boilers, air-handling units) for correct operation and adjust where necessary
- Check all switching and monitoring points(pumps, fans, chillers, flow switches, etc.)
- Control loops to be checked and adjusted where necessary(e.g. sensor, damper, actuator cycle)
- Check and ensure flow switches, static pressure sensors and timers are in order
- Checking and repairing of fire damper operation and control
- Checking of MEC controller and PB controllers for correct operation for system communication and there battery back-ups.
- Supply SMS Alarm service and ensure correct operation thereof
- Investigate problem areas for better control, experimenting with supply air, return air, enthalpy or averaging control
- Check and repair server where necessary
- Supply report after every service
- System improvement and energy management to form part of service
- Check and repair UPS's
- Physically check damper operations that control return-, outside- and exhaust air and enthalpy to confirm correct operation as per BMS settings and to ensure economy cycles are functioning efficiently
- Physically check actuator operation for dampers, vortex dampers, cooling towers to confirm correct position as per BMS settings – make sure bolts are properly secured to prevent slipping on damper shafts.
- Examine, clean and test all control devices
- Check and ensure all sensors – for air temperature: supply-, return- and fresh/outside air, humidity, enthalpy and room temperatures are functioning properly.
- Also check all automatic temperature set points and adjust where necessary, including re-heater set points and sensors to switch on and off at the correct temperatures
- Check boiler temperature and pressure sensors and overheat stats for correct operation
- Physically check heating- and cooling coil valves positions are correct as per BMS Settings
- Check that Chiller by-pass valves are operating correctly to prevent chillers from starting and stopping too frequently- do adjustments where necessary
- All minor repairs where material is not required must be done as part of service
- Check that water differential pressure controllers are operating correctly
- Check all control interlocks on control panels and interaction with other controls are functioning correctly
- Check that level switches on hot water and Chilled water make up and expansion tanks and on open hot water expansion tanks in Plantrooms P1A and P6 are functional
- Ensure safety interlocks between boilers and chillers are operating correctly to prevent current overload
- Source and supply and install necessary replacement parts.
- Provide emergency call-out service – 2hour response time – report on site within 4 hours

Annual Service

- Calibration of sensors, thermostats, humidity controls, temperature controls and pressure controls
- Stroke dampers and valve actuators
- Check status of all panel point addresses to ensure all is in order

Note: Lead times for any emergency call out shall be 2 hours from call out. Failure to respond with such time will result in NCR

Generic list of Eskom Equipment for guidance purposes only

- Central Plants
- Chillers
- Boilers
- Heat-exchangers
- Air-handling units
- Heaters – Main and re-heaters
- Filtration
- Water treatment(Cooling towers/condensed water, chilled water, boilers)
- Package Units
- Heat pumps for water heating
- Window Units
- Console Units
- Split Units
- Ducted Splits Units
- Data Room Aircons
- Extraction systems – transformer rooms, toilets, etc
- Fresh air systems
- Domestic Fridges
- Commercial Cold Rooms and Freezer rooms
- Kitchen Extraction and Supply systems
- Ice machines
- Under counter fridges
- Upright fridges and freezers
- Ice tops

Scope of work for new air-conditioners at EAL

- Heat load calculations to be submitted with quotes as well as proof of qualifications of installer on site. (See competency section)
- Successful contractor must supply operating and installation manuals as well as a complete set of trouble shooting and service manuals or CD's with all the relevant electrical diagrams for the indoor units, outdoor units, controller cards, remote controls, etc. for all types of units installed as part of the contract or installation.
- Where existing equipment are replaced, the quotes should include the removal of old air-conditioners, including the old piping and wiring, etc. but it stays the property of Eskom and none of it shall be used for the new installations.

Installation

- If a split type air-conditioner is fitted, where the main plant used to supply air-conditioning, the supply air must be blanked off properly with galvanized end-caps on the ducting itself.
- The pneumatics must be blanked off with the correct fittings as well.
- The sensors in the room must stay in the room, in working order.
- Where the removal of old air conditioners influence existing air conditioners the contractor must make good. E.g. sealing of holes where drains used to tap in existing installations, etc.

Installations to be done as per manufacturer specifications

In Addition:

- Each air-conditioner indoor unit to be installed, level, in the best possible position to obtain optimal function of the air-conditioner , regarding air-flow, or as instructed by the project officer but at least 100mm from the ceiling to allow for maintenance on the indoor unit.
- Indoor unit back plate to be fixed to the wall with at least 6x55mm anchor nails or bigger.

- The refrigerant pipes to be installed in separate armerflex as required by manufacturer's specifications. Armerflex joints to be sealed with 50mm pvc tape.
- No joints allowed on cabling, for electrical connections, between indoor and outdoor units. (Evaporators and condensers)
- The refrigerant piping, drain pipes and indoor/outdoor electrical connections to be installed in a 50mm x 75mm white PVC enclosure (trunking) with a solid cover on the inside of the building. (When working in straight lines, joints on the trunking and its covers are allowed at 3 meter intervals only.)
- The supply cable to the isolator to be installed in 25mm x 15mm white PVC trunking. (When working in straight lines, joints on the trunking and its covers are allowed at 3 meter intervals only.)
- Blue PVC condensation drain pipes and elbows, couplings, etc. to be used. (Proper joints with PVC glue are allowed where necessary. Drains to stop at 100 mm from ground level and must be covered with trunking.)
- Drains running horizontally, to be in a straight line and level or slightly downwards to ensure proper draining.
- When the installation is done through a brick or concrete wall.
- A 10mm pilot hole to be drilled from inside the room to the outside.
- A 65mm hole to be drilled from the inside, halfway through the wall towards the outside. From the outside a 65mm hole to be drilled towards the inside of the room by lining the hole up via the drilled pilot hole. This is to prevent the damaging of bricks or concrete on the outside of the building.

When the installation is done through metal sheeting, drywall etc.

- A 65mm hole to be drilled with a hole saw.
- The holes through the walls should be sealed with foam to make good and prevent insects and reptiles entering the building from outside
- Each air-conditioner outdoor unit to be mounted at the end of a hot dipped cantilever bracket (white powder coated) against the outside wall. 450 mm brackets to be used on condensing units up to 12000 Btu and 650mm brackets for 18000 Btu condensing units. The bracket to be at least 1meter above ground level at a comfortable height, to enable the servicing of the unit, without making use of a stepladder. The outdoor units should not obstruct any windows, doors, walkways, etc.
- These brackets to be secured with raw bolts against the walls.
- The refrigerant piping and indoor/outdoor electrical connections to be installed inside a 75mmx75mm hot dipped galvanized enclosure with a solid cover on the outside of the building. This should cover the hole and extend right to the ground. (When working in straight lines, joints on the trunking and its covers are allowed at 3 meter intervals only.)
- All trunking and remotes to be secured with fisher plugs/hammering nails to the walls but pop rivets or self-tapping screws to be used on sheeting after neatly drilling the correct size of holes.
- All open ends of trunking to be covered with end caps and all of the steel enclosure ends should be painted with a cold galvanizing compound on cut joints to prevent rust.
- Holes through the sheeting on the outside of the building to be sealed off with bitumen and its cloth, matching the colour of the existing sheeting.
- All open armerflex on the outside of the building to be painted with roof paint or bitumen to protect it against UV rays and weather conditions, matching the colour of the existing walls/sheeting.
- Any accidental damage to be repaired. E.g. If holes on the inside of the building are exposed it should be filled with polyfilla and sanded down neatly.
- The refrigerant system shall be pressure tested to 2800Kpa with dry Nitrogen and pressure shall be maintained for two hours to proof the refrigerant system leak free. Vacuum shall be drawn to below 200 Microns. Purging the refrigerant system with refrigerant, will not be acceptable. Refrigerant recyclers should be used if necessary and no refrigerant should be released to the atmosphere. Oxygen free Nitrogen to be purged through the refrigerant pipes when welding the joints.
- A COC must be issued for all the electrical installations.

Typical materials that will be used. (All SABS approved and as per manufacturer specifications)

- 50mm x 75mm white PVC enclosure.
- 75mm x 75mm hot dipped galvanized enclosure.
- Refrigerant piping of the correct type and size.
- Armerflex.
- 7 core cable.
- 20mm blue PVC condensation drain pipes.

- White powder coated cantilever brackets.
- Hammering nails/fisher plugs.
- Raw bolts.
- 50mm PVC tape.
- Cable straps.
- Pop rivets.
- Self-tapping screws.

Refrigeration Equipment

Monthly Service

- Check Operation of Unit
- Clean Condenser Coil
- Check System Gas Charge
- Leak Test Refrigerant System
- Check Compressor Oil Levels
- Check Operating Pressures. Record Discharge and Suction
- Check Safety Cut-Outs. Record Discharge, Suction & O/P/S
- Record Time Delay of Oil Pressure Safety Switch
- Check for Signs of Oil Leaks
- Check for Signs of Vibrations
- Clean Condenser Coils (Hose)

Cold Rooms

Monthly Service

- Check Operation of Unit
- Clean Condenser Coils (Hose)
- Check System Gas Charge
- Leak Test Refrigeration System
- Check Compressor Oil Level
- Check Operating Pressures and Record
- Check Safety Cut-Outs and Record Discharge & Suction
- Check for Signs of Oil Leaks
- Check for any Signs of Vibration

Counter Fridges

Quarterly Service

- Check Operation of Unit
- Clean Condenser Coils (Hose)
- Check System Gas Charge
- Leak Test Refrigeration System
- Check Compressor Oil Level
- Check Operating Pressures and Record
- Check Safety Cut-Outs and Record Discharge & Suction
- Check for Signs of Oil Leaks
- Check for any Signs of Vibration

Bar Fridges

As and when required Service

- Pressure Test Refrigeration System
- Check All Door Seals

- Check General Condition of Fridge.
- Record temperature.

1.3.2 Plumbing and Drainage

Service

- Repair and replacement of leaking taps and cisterns
- Replacement of copper and PVC pipes
- Repairs and replacement of urinals, basins, sinks, tubs, troughs, runnel, shower trays, shower heads, tanks toilet.
- Water connection to hydro boilers , water tanks sewer system and buildings
- Unblocking of drainage structures , pumps including manholes
- Grease or replace gullies
- Replace aluminium glass shower door , manholes lids
- Replacement of threaded tubing and valve
- Installation of water tanks , hydro boilers
- Pressure jetting-ad hoc maintenance
- Wash bay sumps maintenance and issue disposal certificate –this is for major offices only
- Attend to water leaks /blockages call outs
- Keep basic spares on site to address leaking taps and pipes (copper and PVC)
- Water tank repair and replacement
- Septic /conservancy tank repair and maintenance.
- Annual testing of boreholes
- Storage tanks
- Supply and installation of geysers and other hot water systems
- Conditional assessment of piping and drainage systems
- Supply and installation of water treatment units for HVAC units

1.3.3 Civil Works and Mechanical

Installation

- Kitchen Hydroboilers

Service

- Breaking down and removing brickwork, reinforced concrete including cutting off and removing reinforcement.
- Break out and from opening through brick wall for window including necessary precast or concrete lintels, making good plaster or facings on one or both sides, into reveals.
- Taking out and removing doors , locks, windows, including thresholds and sills from brickwork to remain (build up or altering openings elsewhere measured)
- Fixing of existing doors, windows and fanlights.
- Ramp and steps to park home entrance
- Ground stabilisation
- Paving
- Painting
- Tiling and glazing
- Carpentry, masonry, joinery and ironmongery
- Plastering
- Bricklaying
- Roof sealing
- Fixing of existing roof covering complete with ridge and hip capping, fittings, flashings (elsewhere measured) with pitch not exceeding 50 degrees.

- Clean existing roof covering using a high pressure water cleaning system and steel brushes removing all loose paint, spawl and deleterious matter.
- Repairs to cracks in existing plaster
- Taking up and removing vinyl floor coverings, carpeting and suspended floor.
- Maintenance of drainage structures.
- Repairs to existing structural steelworks including various types of fencing
- Galvanising of existing steelworks
- Maintenance of existing roadworks and markings including cut, fill, compact, primer and tarmac on existing worn out roads
- Painting of road marks
- Repair, replace, paint and clean kerbing
- Repair clean and maintain storm water catch pits and piping
- Install and repair blinds
- Frosting and tinting of glass doors and windows
- Apply gypsum plaster on surfaces and ceiling (Rhinolite)
- Service and install automated doors
- Install and service gate motors

Sewerage Controls and Alarm Panels

Quarterly Service

- Check control panels for correct operation.
- Ensure panel electronics is dry.
- Check all connections.
- Visually Inspect Contactors and Relays
- Ensure that All Pilot Lights are in Working Condition
- Check for Loose Connections and Tighten
- Generally Clean Out Panels and Components
- Ensure that All Control Gear Operate Correctly
- Check Overload Settings
- Ensure Wiring is Neat
- Ensure All Panels Are Locked

1.3.4 Electrical, Satellite TV, Generators and UPS System

Service

- The checking of the mechanical soundness of all parts.
- The checking of the semi-conductor power devices, transformers, filter elements and the like
- The checking and, if necessary, adjusting of the voltage of the DC circuitry.
- The checking and, if necessary, adjusting of the output voltage of the AC circuitry.
- The checking and adjusting of all electronic regulating circuits.
- The cleaning of the UPS system
- The checking of the DC caps.
- The checking of the AC filters caps.
- The checking of all Fan operations.
- Visual checking for Hot Spots (Hot Spots are discolouring of power wires and main bus bars)
- The checking of batteries for loose connections, hot spots and terminal corrosion.
- The checking of load currents and voltages.
- The checking of environmental temperature and ensuring that it is within the UPS operational specifications.
- The checking and recording on a log sheet of the voltage of each battery block.
- The cleaning of the batteries.
- Conduct a battery discharge test using the s existing load connected to the Equipment to determine the capacity of the battery.

- The checking of sufficient lighting.
- Should the Technician find any problem during the inspection
- Submit the detailed service report will be handed to site personnel directly after completion of the service
- Where after arrangements to correct these faults can be made

Main and Sub Electrical Distribution Boards All Blocks

Service

- The Contractor shall be responsible for the cleaning, service, maintenance and repairs to all Main and Sub Electrical Distribution Boards and Control Equipment.

Switches, Change-Overs, etc.

Service

- Main incoming supply, main switches, change-over systems, bus bars and the supply up's to each of the local isolators for each individual piece of equipment.

Charger and Batteries

Battery Tripping Unit

Service

- Clean off any acid from battery terminals
- Check water levels on all cells
- Check all connections
- Check load circuits on battery
- Check supply voltage
- Check battery voltage
- Test all single cell internal battery resistance (Test conducted per battery)
- Test all single cell battery voltage (Test conducted per battery)
- Check all indication functional
- Compile test report according to Charger specifications

Battery Testing

Service

- Check hydrometer
- Check casing condition
- Check the water
- Check terminals
- Note Volts
- Note Amps
- Compile battery report
- Checking of input and output terminations
- Installation of batteries in battery cabinets or onto stands.
- Checking of battery connections
- Complete mechanical check of the UPS system.
- Electrical and calibration check of the UPS system
- Testing of all UPS alarm functions including Remote Alarm Panel (RAP) if supplied
- Mains failure test, using existing load, to prove correct operation of UPS system
- Explanation of UPS operation and alarms to customer

- Hand-over acceptances.

Certificate of Compliance

Service

- Issue the certificate of compliance as electrical regulation.

Infra-Red Scanning

Service

- Must be done on the tested, balanced and commissioned complete electrical installation
- Conduct an Infra-Red Scan survey on all the above mentioned distribution boards under full load condition.
- On completion of the survey, a detailed written report including photographs shall be handed to the Employer.

Satellite TV Services

- New satellite TV installations at different accommodation units

Monthly service

- Inspect all Satellite TVs functionality, provide a written report with all defects and recommendations found during inspection.

1.3.5 Fire Protection & Sprinkler System

Fire and Smoke Detection

Service

- All the equipment as specified above shall be serviced and maintained in strict accordance with the manufacturer's specifications and recommendations.
- Manuals are available on the Site and shall not be removed from the Site.

Fire Detection System and Alarm Systems

Service

- Each smoke detector shall be activated and checked for operating correctly including all remote indication associated with the relevant smoke detector.
- Each smoke detector shall be inspected during the service to be in a good condition and not damaged.
- Each smoke detector shall be wiped clean during the service.
- Ensure that during the service of each smoke detector is recorded as per its number on the service report sheet and checked accordingly.
- The relevant fire panels shall be checked to ensure that all visual and audible alarm signals as per zone are correctly received.

Break Glass Units

Service

- Each break glass unit shall be activated and checked for correct operation including all remote indication associated with the relevant break glass unit.
- Each break glass unit shall be inspected during the service to be in a good condition and not damaged.
- Each break glass unit or shall be wiped clean during the service
- Ensure that during the service each break glass unit is recorded as per its number on the service report sheet and checked accordingly.
- The relevant fire panels shall be checked to ensure that all visual and audible alarm signals as per zone are correctly received.

Public Address and Evacuation Systems

Fire Panel

Service

- All visual and audible alarms associated with the zones being tested are to be checked for correctness of operation. All control signals on fire panel and within the building to be tested and verified correct.
- Check power supply unites and ensure satisfactory operation.
- Check on condition of batteries and report any defects.
- Check all cable terminations and ensure tightness.

Test Fire Signal to Fire Brigade

Service

- A test shall be carried out to ensure that a fire signal from the Eskom Building EAL is correctly received at the Emergency and Disaster Management Centre.

FM 200 Gas Fire Suppression System

Service

- Before the Contractor proceeds to provide the Works, a risk assessment shall be conducted and all the relevant safety measures shall be put in place and be recorded in writing.
- Test the operation of the entire system and record all the steps and the findings on the service report sheet.
- Trigger test each one of the detectors and record all the steps and the findings on the service report sheet.
- Visually inspect all gas cylinders, record all the findings. And the pressure on the service report sheet
- Pressures test the gas cylinders when required by regulation or law.

1.3.6 Waste Water Treatment and Sewage System

Operations

Plant needs to be operated on a 24-hour basis

Daily

- Start raw water pumps
- Check pH and chlorine levels and keep a record
- Check pH/flow readings and record
- Check water flocculation and record pH
- Check stirring chemicals in makeup tanks

- Make up chemicals in tanks, if required
- Backwash filter as required
- Check that dosing pumps are pumping and that dosing rate is correct
- Check the chlorine dosing rate and record
- Start high lift pumps

Weekly

- Do all daily checks
- Backwash filters
- Flush the dosing line with acid

Monthly

- Do daily and weekly checks
- Check pumps, glands, etc.
- Clean items as required further in plant
- Allow the HTH chemical makeup tank to empty and clean out sludge from HTH/Alum make up tank

6-Monthly

- Check sand in filters, and replace or replenish if necessary

Yearly

- Do daily, weekly and monthly checks
- Check all electrical connections
- Check functioning of all pumps

Monthly Maintenance

- Check pumps
- Check float switches
- Check sand filters
- Check all valves
- Flush the reservoirs with Chlorine
- Check all electrical connections
- check the structural integrity of the site including steel and concrete work

1.3.7 Diesel Generator and Storage Tanks

Supply and installation

Supply and install backup electricity generators

Inspection and service

Weekly Inspection (Visual inspection of the following)

- General condition of prime mover/generator
- Condition of belts & hoses
- Engine oil level
- Lube oil heater
- Coolant level
- Water pump
- Jacket water heater
- Radiator
- Electrical/Generator breaker closed

- Battery Electrolyte level
- Battery Charger
- Exhaust system
- Fuel supply level
- Tank vent(s)

Monthly Inspection

- Check Fan belt, condition and tension
- Check radiator passages is clean
- Check radiator hoses and clamps
- Check seal faces of elements, air cleaner, hoses and clamps for dust ingress
- Check thermo heater operation and temperature
- Check all guards in position and secure
- Check battery charger
- Check batteries, lugs, clean and tighten
- Battery test:
 - o Check hydrometer
 - o Check casing condition
 - o Check terminals
 - o Note Volts
 - o Note Amps
 - o Compile battery report
- Start engine
- Check for any leaks
- Check charge alternator operation
- Take oil pressure gauge reading
- Take engine temperature gauge reading
- Check low radiator level
- Check low fuel level
- When engine has stopped, top up with oil
- Check alternator coupling
- Check air vents on alternator
- Check fuel system
- Drain water trap
- Check all pipes and fittings
- Check exhaust, manifold, silencer and pipes
- Check base and anti-vibration mounts
- Run plant off load
- Clean plant and equipment

Quarterly Inspection and Minor service

- Check Fan belt, condition and tension
- Check radiator passages is clean
- Check radiator hoses and clamps
- Add water conditioner
- Drain radiator/system and refill
- Drain oil and refill
- Change fuel filters
- Change oil filters
- Change water conditioner filters
- Change air filters (if required)
- Check seal faces of elements, air cleaner, hoses and clamps for dust ingress
- Check thermo heater operation and temperature
- Check all guards in position and secure
- Check battery charger
- Check batteries, lugs, clean and tighten
- Battery test:
 - o Check hydrometer

- o Check casing condition
 - o Check terminals
 - o Note Volts
 - o Note Amps
 - o Compile battery report
- Start engine
- Check for any leaks
- Check charge alternator operation
- Take oil pressure guage reading
- Take engine temperature guage reading
- Check low radiator level
- Check low fuel level
- When engine has stopped, top up with oil
- Check alternator coupling
- Check air vents on alternator
- Check fuel system
- Drain water trap
- Check all pipes and fittings
- Check exhaust, manifold, silencer and pipes
- Check base and anti-vibration mounts
- Run plant on load
- Clean plant and equipment

Annual Service

All of the above items are to be attended to in addition to the following items:

- Drain radiator
- Refill with new water conditioner
- Drain oil
- Supply and fit new oil filters
- Refill with new oil
- Remove and replace fuel filters
- Remove and replace air filter
- Run the set up to temperature and top up all levels afterwards.
- Check entire panel operation

Diesel Storage

Annual Service Pressure tanks

- Pressure test of diesel tank.
- Test for loss and leaks including a written report

Service Diesel tank & Diesel fuel testing

- Visual inspection of the fuel system.
- Checking the filters, tanks, fillers and site tubes.

Bi-annual Service Conidia Bioscience test

- Conidia Bioscience Fuel-stat test and written report.

Annual Service Filtration & Additives

- The diesel in both tanks will be filtered and polished if no filtration system is installed including additives added.

- The "Fuel Right" method to be utilised

Service Fuel supply

- Supply of 50ppm diesel to fill up tank.
- Proof of purchase to be submitted.

General Building Requirement: NB

- Daily inspection of all electrical, mechanical, civil , fire system , generators , BMS sewer plant security parameter fence and street light.(daily tick sheet to be presented to the Eskom supervisor or Facility manager weekly reporting

1.3.8 Help Desk Services

The functions of the Helpdesk include but not limited to the following:

- Providing a single point of contact for receiving all maintenance services calls, requests and complaints.
- Preparing and issuing of work orders to the Employer for approval prior to any work been executed.
- Closing of all the calls, requests and complaints once work is completed and verified by the Employer.
- Preparing of monthly reports for corrective and planned maintenance work executed.
- Executing ad-hoc services as and when requested by the Employer.

The Employer will provide the necessary training on the work planning system.

1.3.9 Water Analysis

CHEMICAL AND BACTERIAL ANALYSIS All tests conducted must include for the following:

- pH at 25°C: Electrometric (Based on SANS 5011)
- Electrical conductivity at 25°C Conductimetric (Based on SANS7888)
- Suspended solids at 105°C Gravimetric (Based on SANS 6049)
- Total Solids at 105°C: Gravimetric (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Dissolved solids at 180°C: Gravimetric (Based on SANS 5203)
- Turbidity: Nephelometric (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Chemical Oxygen demand: Titrimetric (Dichromate reflux). (Based on government Gazette 2512)
- Oxygen absorbed: Titrimetric (Based on SANS 5220)
- Chloride: Titrimetric (Argentometric) (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Alkalinity: Titrimetric (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Sodium (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Potassium (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Calcium (Based on SANS 216)
- Magnesium (Based on SANS 1071)
- Copper (Based on SANS 5203)
- Zinc (Based on SANS 5214)
- Iron (Based on SANS 5207)
- Manganese (Based on SANS 5209)
- Nickel (Based on SANS 6171)
- Chromium (Based on SANS 6054)
- Aluminium (Based on SANS 6169)
- Lead (Based on SANS 5208)

- Fluoride (Based on Standard Methods for the Examination of Water and Wastewater (APHA, AWWA, WEF), 21st Edition)
- Ammonia (Quickchem method 10-107-06-2-J)
- Nitrate (Quickchem method 10-107-04-1-A)
- Orthophosphate (Quickchem method 10-115-01-1-O)
- Sulphate (Quickchem method 10-116-10-1-A)
- Hexavalent Chromium (Quickchem method 10-124-13-1-A)
- Microbiology:
- Enumeration of Total Coliforms, Faecal Coliforms and E.Coli.
- Standard Plate Count.

1.4 Interpretation and terminology

The following abbreviations are used in this Service Information:

Abbreviation	Meaning given to the abbreviation
BBBEE	Broad Based Black Economic Empowerment
QM	Quality Management
ERE	Eskom Real Estate
SD&L	Supplier Development and Localisation
SHE	Safety, Health and Environmental
TSC	Term Services Contract

2 Management strategy and start up.

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

During the execution of the Service, the Contractor shall maintain a suitable office in the area allocated for that purpose by the Employer, which shall be the headquarters of the Contractor's Representative and authorised to receive instructions or other communications or notices under the Contract. The Contractor shall maintain, at the office, up-to-date copy of the Contract and all Contract related documents (including correspondence and documents issued by and to the Contractor, Compensation Events, Progress Reports, correspondence, non-conformance reports etc.). These documents shall be available to the Employer at all times.

2.2 Management meetings

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

Title and purpose	Approximate interval	Location	Attendance by:
Progress / feedback meeting	Monthly	EAL	Employer and Contractor
Risk management meeting	Monthly	EAL	Employer and Contractor
Overall contract progress meeting	Monthly	EAL	Employer and Contractor
Safety, health, environmental and quality meeting	Monthly	EAL	Employer and Contractor

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

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

2.3 Contractor's management, supervision and key people

The Contractor shall provide the Employer with a detailed organogram of all staff and management on the contract. This must be revised quarterly and must reflect any changes to the staff and management structure. The Employer reserves the right to audit and verify the structure. The Contractor shall have a full time co-ordination and breakdown team will be on site daily. The team to consist of:

- 2 (two) Qualified Industrial Refrigeration Mechanics, qualified as Electrician Artisans as well, authorised to work on electrical equipment up to and including 380Volts
- 2 (two) Mechanical Assistant Artisans
- 2 (two) Electrical Artisans
- 2 (two) Electrical Assistant Artisans
- 2 (two) Plumber Artisans
- 4 (four) Handymen
- Project co-ordinator/Senior Supervisor Technical

The artisans and semi-skilled workers to react to works requests/faults reported immediately to satisfy the client. This service must be fast and efficient as ERE is measured on the time it takes to close out calls. When all calls are closed they are allowed to continue with planned maintenance work.

The Project co-ordinator/Senior Supervisor Technical will be the link between Eskom and the Contractor. He will be knowledgeable of the plant and need to instruct and co-ordinate all work on site.. He will also be responsible for all the reporting that flows out of the work and all administration on site. The supervisor will also be responsible for the health and safety of staff and sub-contractors on site. Knowledge of the NEC TSC will be an advantage.

2.4 Provision of bonds and guarantees

N/A

2.5 Documentation control

The Contractor will submit the following documents to the Employer for review, the Employer will review the documents for acceptance and inform the Contractor if the documents have been accepted or if it is not accepted and stating the reasons of not the accepting the documentation. The Employer will give the Contractor reasonable time which will be agreed to between the Contractor and the Employer to respond or re-submit the documents.

2.6 Invoicing and payment

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

The *Contractor* shall address the tax invoice to:

Eskom Holdings SOC Ltd
Group Capital Division
Eskom Real Estate
Megawatt Park Maxwell Drive Sunninghill Sandton
PO Box 1091 Johannesburg 2000, SA

and include on each invoice the following information:

Name and address of the *Contractor* and the *Service Manager*;
The contract number and title;

Contractor's VAT registration number;
The Employer's VAT registration number 4740101508;
Description of service provided for each item invoiced based on the Price List;
Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

2.7 Contract change management

The Employer may instruct changes to the scope at any time, each instruction shall set out the change and the date on which it becomes effective; and must be issued to the Contractor in writing to be valid.

2.8 Records of Defined Cost to be kept by the Contractor

The Contractor must keep all documentation related to the compensation events, quotes and instructions from the Employer for the period of 5 years after contract completion for audit purposes.

2.9 Insurance provided by the Employer

The insurance policy provided by the Employer will be dealt with as specified in Clause 86.1 TSC.

2.10 Training workshops and technology transfer

N/A

2.11 Design and supply of Equipment

The Contractor shall supply the vending coffee machine in accordance with the Employer specification.

2.12 Things provided at the end of the service period for the Employer's use

2.12.1 Equipment

N/A

2.12.2 Information and other things

At the end of the service period the Contractor will be required to provide the Employer with the Contractor's Safety file

2.13 Management of work done by Task Order

All work will be done in terms of Task Order (refer to attached Annexure A).

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

The Contractor shall comply with the health and safety requirements contained in the Eskom Real Estate SHE specification (as applicable).

3.2 Environmental constraints and management

The Contractor shall comply with the environmental criteria and constraints stated in Eskom Real Estate SHE specification (As applicable).

3.3 Quality assurance requirements

The Contractor shall comply with the quality requirements as stated in QM-58 (As applicable).

4 Procurement

The Contractor provides the following procurement services in performing the scope:

- Sub-Contractor's lists for to be submitted to the Employer for review and approval.
- Follows the least cost and time procurement strategies.
- Obtains the Employers' approval prior to committing any contracts or orders.

4.1 People

4.1.1 Minimum requirements of people employed

In some instances the Contractor may be required to recruit staff from the local to site communities.

4.1.2 B-BBEE

The *Contractor* shall maintain the Required B-BBEE Recognition Level for the duration of the Agreement. The *Contractor* shall provide Eskom with a valid Verification Certificate and such other information as Eskom may reasonably request, in respect of which the Contractor claims maintenance for the duration of the Agreement of the Required B-BBEE Recognition Level. For the purpose of this clause "verification Certificate" means a verification certificate and the accompanying documentary proof confirming the B-BBEE Status of a particular entity as issued by an accredited verification agency.

4.1.3 Supplier development and localisation

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the supplier, development and localisation matrix.

The *Contractor* shall keep accurate records and provide the *Service Manager* with reports on the *Contractor's* actual delivery against the above stated supplier development and localisation matrix

The *Contractor's* failure to comply with his supplier development and localisation obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.2 Subcontracting

4.2.1 Preferred subcontractors

N/A

4.2.2 Subcontract documentation, and assessment of subcontract tenders

Prior to appointment of a sub-contractor, the Contractor shall submit to Eskom all detail of the contractor, including B-BBEE details, for verification.

4.2.3 Limitations on subcontracting

The Contractor shall sub-contract 30% of the whole of the services to the local to site companies but shall, subject to Eskom's consent (which consent shall only be valid if given in writing and signed by the Eskom Representative), be entitled to sub-contract selected parts of its obligations in terms of this Agreement to any other person/s, provided that such sub-contracting shall not relieve the Contractor of its obligations and the Contractor shall remain liable for all and any acts or omissions of such person/s as though they were acts or omissions of the Contractor.

The Contractor shall not be entitled to cede, delegate, assign or otherwise transfer any of its rights and/or obligations without the prior written consent of Eskom, which consent shall not be unreasonably withheld.

4.2.4 Attendance on subcontractors

N/A

4.3 Plant and Materials

4.3.1 Specifications

N/A

4.3.2 Correction of defects

The Contractor shall provide maintenance and repair of all the equipment necessary to provide the services. All defects to the works shall be rectified as specified in QM 58.

4.3.3 *Contractor's* procurement of Plant and Materials

The Contractor may be required to provide the Employer with a technical data sheet of the equipment or material supplied to the Employer. A guarantees and warranties certificate may also be required for any plant and material supplied by the Contractor to the Employer.

4.3.4 Tests and inspections before delivery

. The employer representative will conduct inspection if deemed necessary to do so.

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

N/A

5 Working on the Affected Property

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

The Employer will provide access control for the Site. Strict access control shall be implemented 24 hours a day at all entrances to the Project Site. All persons and vehicles entering or exiting the Project Site may be subjected to searches and the Employer reserves the right to refuse entrance to Site to any person not meeting security and/or access requirements.

From time to time, and as required, the Employer will issue policies and procedures regarding Project Site security and access control. These policies and procedures shall be strictly adhered to by the Contractor. The Employer shall be entitled, at his discretion, to amend or relax the Project Site security and/or access requirements to deal with emergencies or other circumstances justifying such amendment or relaxation.

Where the contractor is allocated a construction yard, security will be contractor's responsibility and must comply with the employer's requirements.

Any breach of security must be reported to the Employer immediately.

5.2 People restrictions, hours of work, conduct and records

Working hours shall be from 07:30 to 16:30, Monday to Friday or as directed by the Employer. Overtime will be approved by an Employer prior to the Contractor working overtime.

The Contractor shall keep records of his people working on the Affected Property, including those of his Subcontractors. The Employer shall have access to records at any time.

5.3 Health and safety facilities on the Affected Property

The Contractor shall ensure that alternative arrangements are made for possible incidents occurring after normal working hours. Where services are not available from the Eskom Medical Centre, the Contractor shall make alternative arrangements for any medical assistance. Proof of this must be made available in the Principal contractors SHE Plan.

5.4 Environmental controls, fauna & flora

The Contractor shall comply with the safety, health and environmental requirements stated in the ERE SHE Specification.

5.5 Cooperating with and obtaining acceptance of Others

Except as directed by the Employer, the Contractor shall in no way interfere with, remove, adjust or operate plant, materials and/or equipment of or being supplied or operated by Other Contractors.

5.6 Records of Contractor's Equipment

The Contractor is responsible for maintaining the asset register equipment on site and shall be audited by the Employer from time to time.

5.7 Equipment provided by the Employer

N/A

5.8 Site services and facilities

5.8.1 Provided by the *Employer*

The Employer will, at his expense, arrange for, develop and maintain the various facilities and services at or near the Site, as applicable. The services and facilities provided by the Employer are listed below:

- Electricity;
- Water supply; and
- Sanitary Services.

5.8.2 Provided by the *Contractor*

The Contractor shall provide all other services and facilities not mentioned in 5.8.1.

5.9 Control of noise, dust, water and waste

The Contractor shall comply with the safety, health and environmental requirements stated in the project SHE Specification.

5.10 Hook ups to existing works

The performance of the Works which affects the Employer's operations or the systems of Other Contractors shall be scheduled to be performed only at times approved by the Employer. The procedure for carrying out work which of necessity interrupts the Employer's operations, or the systems of Other Contractors, or imposes abnormal operating conditions on their systems, is subject to approval of the Employer.

5.11 Tests and inspections

5.11.1 Description of tests and inspections

The Contractor is responsible for providing quality inspections as per the scope requirements and rectifies all defects within agreed time period. The Contractor shall supply the end of job documentation associated with the services. The end of job documentation consists of the signed off (where applicable) completion forms of acceptance by the Employer.

5.11.2 Materials facilities and samples for tests and inspections

In some instances, the Employer representative may request samples for testing/ inspection.

6 List of drawings

6.1 Drawings issued by the *Employer*

The site drawings shall be issued by the *Employer* on request.

ANNEXURE A: TASK ORDER

Task Order form for use when work within the *service* is instructed to be carried out within a stated period of time on a Task by Task basis

ANNEXURE B: X 17 – LOW PERFORMANCE DAMAGES

Item No.	Key Performance Area	Key Performance Indicator	Key Performance Targets	Penalties
1	Service Performance Management	React within 1 hour to diagnose the root cause	100% Compliance	3 consecutive non-conformance will result in R 5000 penalty, amount payable the following month
		Critical work to be completed within 4 hours (blocked toilets, leaking urinals, earth leakage trips, lights out, faulty plugs, power supply, refuelling of generators, temperature control, overhead projectors, etc)	100% Compliance	3 consecutive non-conformance will result in R 5000 penalty, amount payable the following month
		Maintain 80% for closure of defects vs logged defects	80% Compliance – measured monthly	2 consecutive non-conformance will result in R 5000 penalty, amount payable the following month
2	Statutory Inspection Compliance	Maintain statutory compliance	100% Compliance	2 consecutive non-conformance will result in R 50 000 penalty, amount payable the following month 3 consecutive non-conformance will result in termination of the contract
3	Safety, Health and Environmental Contravention	Safety, health and environment standards are regularly monitored, reviewed and maintained in accordance with all legal and regulatory requirements	0 contravention	3 consecutive non-conformance will result in termination of the contract
4	Availability of Cleaning Equipment	Provide well maintained equipment	100% availability during any random inspection /audit	3 consecutive non-conformance will result in R 50000 penalty, amount payable the following month
5	Employee Compensation and Benefits	Payment of Employee salaries/wages, Provident Fund, UIF, COIDA, etc. as per the agreed date	100% Compliance	2 consecutive non-conformance will result in R 50000 penalty, amount payable the following month 3 consecutive non-conformance will result in termination of the contract