NEC3 Term Service Contract (TSC3)

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

and
(Reg No.)

for **Provision of Supply and Service for Water Treatment Plant Spares for a period of 5 years on as and when required.**

Contents:		**No of pages**
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CONTRACT No.

PART C1: AGREEMENTS & CONTRACT DATA

Contents:

		No of pages
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C1.2b	Contract Data provided by the *Contractor*	[●]

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 Supply of spares and Service for Water Treatment Plant Spares for a period of 5 years on as and when required.

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

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

Options A	The offered total of the Prices exclusive of VAT is	
	Value Added Tax @ 15% is	
	The offered total of the amount due inclusive of VAT is1	
	(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	**[●]**	**[●]**
2	**[●]**	**[●]**
3	**[●]**	**[●]**
4	**[●]**	**[●]**
5	**[●]**	**[●]**
6	**[●]**	**[●]**
7	**[●]**	**[●]**

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

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

	For the tenderer:	**For the *Employer***
Signature	.....	.....
Name	.....	.....
Capacity	.....	.....
On behalf of	..... *(Insert name and address of organisation)*	..... *(Insert name and address of organisation)*
Name & signature of witness	.....	.....
Date	.....	.....

C1.2 TSC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option:	
		A: Priced contract with price list
	dispute resolution Option	**W1: Dispute resolution procedure**
	Secondary Options:	**X1: Price adjustment for inflation**
		X2: Changes in the law
		X3: Multiple currencies
		X13: Performance Bond
		X17: Low service damages
		X18: Limitation of liability
		X19: Task Order
		Z: Additional conditions of the contract
	of the NEC3 Term Service Contract April 20132 (TSC3)	
10.1	The *Employer* is (name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1	The *Service Manager* is (name):	
	Address	**Medupi Power Station, Steenbokpan Road, Lephalale**
	Tel	
	e-mail	
11.2(2)	The Affected Property is	**Medupi Power Station**
11.2(13)	The *service* is	**Provision of Supply and Service for Water Treatment Plant Spares**
11.2(14)	The following matters will be included in	**As identified by the parties from time to time**

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

	the Risk Register	**and recorded on the risk register. The risk will then be discussed in the contract risk meeting**
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 *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**5 working days**
2	**The *Contractor*'s main responsibilities**	
21.1	The *Contractor* submits a first plan for acceptance within	**Period stated on the Task Order**
3	**Time**	
30.1	The *starting date* is.	**TBC**
30.1	The *service period* is	**60 months**
4	**Testing and defects**	
42.2	The Defect correction period is	**to be agreed by both Parties within 48h of the *Employer*'s written defect notification**
5	**Payment**	
50.1	The *assessment interval* is	**Once the spare(s) have passed the Quality Control checks by the *Employer***
51.1	The *currency of this contract* is the	**South African Rand**
51.2	The period within which payments are made is	**30 calendar days after reception of a valid tax invoice for contracts valued below R50 000 0000.00 (Fifty Million Rands) excluding VAT. 60 calendar days after reception of a valid tax invoice for contracts valued R50 000 0000.00 (Fifty Million Rands) excluding VAT and above**
51.4	The *interest rate* is	**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**
6	**Compensation events**	**as per NEC TSC3 Core Clause 6**
7	**Use of Equipment Plant and Materials**	**as per NEC TSC3 Core Clause 7**
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**Only the risks listed under subclause 80.1 of the NEC3 TSC**

9	**Termination**	**as per NEC TSC3 Core Clause 9.**
10	**Data for main Option clause**	
A	**Priced contract with price list**	
20.5	The *Contractor* prepares forecasts of the final total of the Prices for the whole of the *service* at intervals no longer than	**30 calendar days**
11	**Data for Option W1**	
W1.1	The *Adjudicator*	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**1st Floor, Maisels Chamber, 4 Protea Place, Sandton**
	Tel No.	**011 320 0600**
	Fax No.	**011 320 0533**
	e-mail	**info@arbitration.co.za**
W1.2(3)	The *Adjudicator nominating body* 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 *tribunal* is:	**arbitration**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**Johannesburg, South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**
12	**Data for secondary Option clauses**	
X1	**Price adjustment for inflation**	
X1.1	The *base date* for indices is	**the month before the month in which the enquiry closed. Rates are fixed and firm for first 12 Months after first order placement date. There after CPA escalation will apply.**
	The proportions used to calculate the	**propor** | **linked to index for** | **Index**

	Price Adjustment Factor are:	**tion** **0.15** **1.00**	**non-adjustable**	**prepared by**
X2	**Changes in the law**	**The Law of the Republic of South Africa.**		
X3	**Multiple currencies**			
X3.1	The *Employer* will pay for these items or activities in the currencies stated	**Items & activities**	**Other currency**	**Maximum payment in other currency**
X3.1	The *exchange rates* are those published in	**[●] on [●] (date)** **The items & activities will be paid in the other currency** **- to a foreign Bank account nominated by the *Contractor*** **- to a valid SARB approved CFC account in South Africa** **- in accordance with an alternative payment method agreed with the *Employer* before the Contract Date.** **(select one of the three methods as agreed with the successful tenderer prior to contract award and delete the others and this note)**		
X13	**Performance bond**			
X13.1	The amount of the performance bond is	**R [This is depended on the outcome of the financial evaluations]**		
X17.1	The *service level table* is in			

	Services required	**Damages**
X17.1.1	Deliver correct spare(s) as per the order	to be replaced with the correct spares at the Contractor's cost including transport
X17.1.2	Refurbishment	

X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to	**R0.0 (zero Rand)**

X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design of an item of Equipment is limited to	**The greater of** **the total of the Prices at the Contract Date and** **the amounts excluded and unrecoverable from the *Employer*'s insurance (other than the resulting physical damage to the *Employer*'s property which is not excluded) plus the applicable deductibles**
X18.4	The *Contractor*'s total liability to the *Employer*, 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 *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts for which the *Contractor* is liable under this contract for** **Defects due to manufacture and fabrication outside the Affected Property,** **loss of or damage to property (other than the *Employer*'s property, Plant and Materials),** **death of or injury to a person and** **infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**12 months after the end of the *service period*.**
X19	**Task Order**	
X19.2	Task Order delay damages for repairs	**5% of the Task order per day from the Task Completion Date until Task Completion**
	Task Order delay damages for late delivery of spare(s)	**5% of the outstanding item(s) until Task Completion.**
X19.5	The *Contractor* submits a Task Order programme to the *Service Manager* within	**5 days of receiving the Task Order**
Z	**The *additional conditions of contract* 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

Z12.1 83 **Insurance cover**

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

Contractor arising out of and in the course of their employment in connection with this contract	

Z12.2 86 **Insurance by the *Employer***

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 minimur 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

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 44 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 44 of 1999, or any replacement section dealing with the same subject matter.

Z13.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z14 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means ccompliance 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 ooccupational exposure limit.

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

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

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

SANAS means the South African National Accreditation System.

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

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *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 *Contractor* is (Name): Address Tel No. Fax No.	
11.2(8)	The *direct fee percentage* is The *subcontracted fee percentage* is	**%** **%**
11.2(14)	The following matters will be included in the Risk Register	
11.2(15)	The Service Information for the *Contractor*'s 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 *Price List* is in	
11.2(19)	The tendered total of the Prices is	**R**

C1.3 Forms of Securities

1 Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Bank providing the Guarantee)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Reference No. **[●]** *[Drafting Note: Bank reference number to be inserted]*

Date:

Dear Sirs

Performance **Bond – Demand Guarantee**: *[Drafting Note: Name of Contractor to be inserted]*

Project [ ] Contract Reference: …… *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-

1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]

1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]

1.3 "Contract" – means the written agreement relating to the Services, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.] as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted]

1.4 "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]

1.5 "Eskom" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].

1.6 "Expiry Date" - means the earlier of

- the date that the Bank receives a notice from Eskom stating that all amounts due from the Contractor as certified in terms of the contract have been received by Eskom and that the Contractor has fulfilled all his obligations under the Contract, or
- the date that the Bank issues a replacement Bond for such lesser or higher amount as may be required by Eskom

1.7 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);

1.8 "Services" - means [insert as applicable.].

2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

3.1 be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager or its delegate;

3.2 state the amount claimed ("the Demand Amount');

3.3 state that the Demand Amount is payable to Eskom in the circumstances contemplated in the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and

4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

5. The Bank's obligations in terms of this Guarantee:

5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and

5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.

6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.

7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.

8. This Guarantee:

8.1 shall expire on the Expiry Date until which time it is irrevocable;

8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;

8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;

8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and

8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.

8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.

9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____
Bank's seal or stamp

Part 2: Pricing Data
TSC3 Option A

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option A	2
C2.2	The *price list*	**[●]**

C2.1: Pricing assumptions: Option A

1. How work is priced and assessed for payment

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

Identified and defined terms	11 11.2	(12) The *Price List* is the *Price List* unless later changed in accordance with this contract. (17) The Price for Services Provided to Date is the total of the Price for each lump sum item in the *Price List* which the *Contractor* has completed and where a quantity is stated for an item in the *Price List*, an amount calculated by multiplying the quantity which the *Contractor* has completed by the rate. (19) The Prices are the amounts stated in the Price column of the *Price List*. Where a quantity is stated for an item in the *Price List*, the Price is calculated by multiplying the quantity by the rate.

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

2. 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.

3. 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).

4. Preparing the *Price List*

Before preparing the *Price List*, both the *Employer* and tendering *Contractor*s 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.

4.1 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*

Item No.	Mat No	Description	Unit	Estimated Quantities over 5 yrs	Rate

The total of the Prices

Part 3: Scope of Work

Document reference	Title	No of pages
	This cover page	1
C3.1	*Employer*'s Service Information	
C3.2	*Contractor*'s Service Information	
	Total number of pages	

C3.1: *Employer*'s service Information

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1 Description of the *service*

1.1 Executive overview

Medupi Power Station consists of various water plants to treat and ensure that the water, steam, and condensate quality is within the prescribed and acceptable limits in accordance with to chemistry guidelines and standards. The availability of all equipment and components is crucial for the performance of these plants as well as the station at large. This document contains the scope of work for spares supply of the moving machinery of the Water and Sewage Treatment Plants and Condensate Polishing Plant necessary for the proper maintenance of the respective system. The scope also aims to ensure maximum availability of the plants by ensuring the spares stock levels are maintained.

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

The scope for the supply of spares shall be in accordance but not limited to

- All spares in the latest revision of [1] and as stated in BOM.

The scope comprises of sourcing, supply, delivery and offloading of the various pumps, compressors, and gearboxes at Medupi Power Station. The Works include the supply of all the components and kits that are required for the refurbishment of these pumps, compressors, and gearboxes.

The contract is envisaged to be a 60-month contract and shall cover the following systems.

- Main water treatment plant: This shall be inclusive of the chemical dosing system, chemical dosing to auxiliary cooling plant and to the steam-water cycle.
- Condensate polishing plant: This shall be inclusive of the CPPs' common regeneration system.
- Mobile water treatment plant.
- Sewage treatment plant

1.2.1 Supply of Spares

The Works include the following:

1. The description of the spares and the quantities that the *Employer* envisages for the duration of the contract is indicated in Appendix A. This value will be used with other estimates to determine the overall contract value. It should be noted that this is just an estimate, and it does not mean that the *Employer* will definitely consume the spares in the duration of the contract. These quantities are therefore not fixed, and the *Contractor* will only supply spares when instructed by a purchase order, from the *Employer*, to do so.
2. Spares that are not included in the list will be supplied as part of the "Miscellaneous spares not specified" portion, as indicated in 3.5.
3. The spares and components will be supplied to the "goods received" section of the Medupi main store where it will be received by the material management section. The spares will be delivered with all the required data books and certificates, where required.
4. A draft QCP shall be submitted (at least 2 weeks prior to starting any work) withhold and witness points specified, for review by Engineering prior to manufacturing, procurement or refurbishments.
5. The *Employer* shall be given sufficient notice by the *Contractor* of any witness and hold points identified for adherence in the QCP. These points may be waived (in writing) by the *Employer* from time to time depending on technical staff availability.
6. Only once the spares have passed the Quality Control checks and are booked into the system can payment be affected.
7. Hardcopies as well as electronic copies of the manufacturing Data Books shall be supplied to the *Employer* with or before the delivery of any spare. This Data Book will be used during on site Quality Control checks to confirm correctness of spare/component delivered.
8. The manufacturing Data Book shall contain as a minimum, but shall not be limited to, approved quality control plan, material certificates, test reports, material catalogue, non-destructive testing reports/certificates.

9. The Spares shall comply shall be as specified. This includes all aspects such as design, materials and material specifications, manufacturing, including manufacturing processes, calibration certificates and acceptance testing. Where spares offered deviate from the original in any respect, it should be indicated to the *Employer* upon quotation/query.
10. It is the *Contractor's* responsibility to ensure that correct spares are delivered. If the incorrect spares are delivered, the spares will have to be replaced with the correct spares at the *Contracto*r cost. This includes transport and delivery.
11. The Delivery and Transport Costs must be included in the quotation.
12. The following packaging requirements should be adhered to:
    a) The Goods are to be packaged in such a manner that it can be transported and stored for an extended period of time without resulting in damage to the goods.
    b) This includes damage due to moisture ingress, corrosion, dust and/or vibrations.
    c) Where lifting gear is utilised to move the goods, the packaging should allow the lifting operation and ensure that the goods are not damaged in any way during the process.
    d) It will also not be necessary to open packaging for any lifting or transport operation.
    e) Where eye bolts are fitted to move the goods, these eye bolts should be fitted such a way that they can be easily removed and replaced with the *Employers*' eye bolts, ensuring that the packaging stays intact.
    f) Packaging and labelling of the components should ensure that the spare can be identified without opening the packaging.
    g) Delivery packaging to have the following detail on it as a minimum (removable adhesive sticker if possible):
        i. Order number,
        ii. A short description of component
        iii. The stock numbers
        iv. Manufacturing date (refurbishment date if applicable)
        v. Space for adding the installation date

    h) The documentation for preservation requirements should be delivered with the component.

1.2.2 Refurbishment of Spares/components

The scope of this contract also includes the refurbishment of components as follow:

1. The *Contracto*r will be issued a "strip-and-quote" task order for components requiring refurbishment or repairs
2. The *Contractor* will be required to collect the spare/component from Medupi Power Station for assessment and also for delivery after completion of works
3. A quote as well as full assessment report (failure report) shall be submitted to the *Employer* (attention to System Engineers) within 10 working days after the issuing of task order for "strip-and-quote"
4. The quote shall contain a detailed breakdown of all spares and services required, including lead time per item as well as total repair work
5. The assessment/failure report should include proof (photos and measurement values obtained) of all components requiring replacement as well as any additional requirements to enable spare/component restoration to original "as-new" specification/condition
6. A draft QCP shall be submitted with the assessment report with hold and witness points specified, for review by the *Employer* prior to any repair work being conducted
7. The assessment report should also include any findings and recommendations as to prevent re-occurrence with regards to the specific failure and or improvement of the lifespan of the spare/component to be repaired
8. Only after the quote, assessment report and QCP has been accepted by the *Employer*, will a task order be issued to proceed with repairs

9. The *Employer* shall be given sufficient notice by the *Contractor* of any witness and hold points identified for adherence in the QCP. These points may be waived by the *Employer* from time to time depending on technical staff availability.
10. A Repair Data Book shall be compiled during the course of repair work for assessment by the *Employer* at any stage during the repair/manufacturing process
11. The Repair Data Book shall contain as a minimum, but shall not be limited to, approved quality control plan, material certificates, profile grinding reports, backlash/end float inspection report, contact markings reports, no load test run report as well as non-destructive testing reports
12. The Repair Data Book shall include test results obtained for brakes, where applicable. As a minimum, but shall not be limited to, braking torque, sustained coil current reading during test, temperature monitoring of brake during test, brake gap achieved, brake release IP rating as per IP65 requirement
13. Only original OEM kits (shafts, bearing, gear sets, etc) shall be used for repairs. Any deviations shall only be allowed if written permission is given by the *Employer*
14. Where equipment or spares are obsolete or will become obsolete in the next 5 years, the *Contractor* is to indicate this to the *Employer* and also indicate viable alternatives.

1.2.3 Obsolescence

1. All spares shall be supplied in accordance the specifications as detailed.
2. Any components that are deemed to be obsolete shall be replaced with an equivalent spare as recommended by the OEM on condition that:
    - The OEM of the product deems the component obsolete in writing. Local distributors are to obtain written communications with the OEM stating such to be in effect.
    - An equivalent of the component from the OEM for the components detailing any retrofitting that will be required with the new spare.
    - Full technical datasheet of the component that has been superseded.
    - Full technical datasheet of the component that supersedes the obsolete part.
3. No equivalent spare shall be accepted if the above bullets are not adhered to.

1.2.4 Alternatives

1. No technical deviations or alternatives to the technical specifications shall be permitted.
2. In the case of obsolescence, the *Contractor* shall follow 3.2 as stated above.
3. In instances where 3.2 does not apply the *Contractor* shall
    - Engage the *Employer* with the alternative proposal.
    - The proposal shall include the datasheet of the item.
    - Prior to purchase and/ or delivery of the alternative, the deviation shall be approved.
4. Any deviation to the above stated shall not be accepted.

1.2.5 Fabrication

1. All components that are to be fabricated shall be in accordance with the specifications provided.
2. The *Contractor* shall come to site to do measurements of the items that require fabrication.
3. The *Contractor* shall provide drawings that will be approved by the *Employer* prior to the fabrication of any components.
4. The *Contractor* shall provide all testing certificates as required.
5. Any technical deviations shall be addressed as per 1.2.1 & 1.2.3 above.

1.2.6 Miscellaneous spares

1. Miscellaneous spares such as pipes, pipe supports, (miter) bends, clamps, gaskets, flanges, fittings such as nipples/weldolets/thriolets/others, consumables, leak sealing devices and wraps, soft kits, engine consumables, FPAS.

1.2.7 Warranty

1. All components shall carry a 24-month warrantee from date of delivery
2. All components shall carry a further 12-month warrantee after installation (which shall not shorten the warranty after delivery), coupling alignment as well as drive vibration reports will be available and used as baseline for spare/component installation
3. Any specific requirements to enable the 12-month warrantee shall be brought forward by the *Contractor* for agreement during negotiations. If witnessing of installation is required, this will be at the *Contractor's* own cost.
4. The warranty shall cover, but not be limited to, minor defects identified, for example: shaft oil seal leakages, minor oil leaks, cooling fan, safety guard or breather related issues, etc.
5. Defective spares under warranty shall be replaced within two (2) months by the *contractor*.

Appendix

PLANT DESCRIPTION	MATERIAL NUMBER	APPLICABLE KKS NUMBER/S	MATERIAL ITEM CHARACTERISTICS (DETAIL DESCRIPTION WITH DEFINING DESIGN CHARACTERISTICS)	OEM	EXPECTED QUANTITIES OVER 5 YEARS	LAB CODE
Pumps						
WTP						
SMBS Transfer Pump 001/005	0633936	0 0GDN70 AP001/005	CENTRIFUGAL PUMP, MODEL ARMEK HTT3000 PP, STAGE 1, HORIZONTAL, FLOW RATE 1.84 m^3/Hr, MAX 8.5 m^3/Hr, PUMP SPEED 2900 RPM, DELIVERY PRESURE 150 KPa, LIQUID SMBS, POWER 0.37 KW, VISCOSITY 200cST, DENSITY 1.15 Kg/dm^3, MOTOR SIZE 0.55 KW, DIRECTION OF ROTATION CLOCKWISE, IMPELLER TYPE MAGNETIC DRIVEN TURBINE, CASING SUPPORT FEET, **FLANGES** SUCT-SIZE/POSITION G 3/4 INCH, DISCH SIZE/POSITION G 3/4 INCH, **MATERIALS** SUCT CASING PP, IMPELLER PVDF, O RING EPDM, SHAFT AL203 99.7 %, SHAFT PROT.SLEEVE EPDM, BEARING PTFEC, PAINTING HIGHLY CORROSIVE.	ARMEK	3	WAT
Coagulant Transfer Pump 001/021		0 0GDN74 AP001/021	PERISTALTIC HOSE (ROTOR AND SHOE) PUMP, MODEL MOUVEX (ABAQUE), STAGE 1, HORIZONTAL,FLOW RATE 5 m^3/Hr, OPERATING PRESSURE 100 KPa, PUMP SPEED 28 RPM, MOTOR SIZE 4KW 4 POLE, OPERATION CAN RUN DRY/WET AND CLOCKWISE/ANTI-CLOCKWISE, LIQUID COAGULANT (ALUMINIUM SULPHATE 27 %, pH 2.1) TEMP 10°C MIN AND 45°C MAX, POWER 3 KW, VISCOSITY 25 mm^2/s, DENSITY 1.2 TO 1.3 Kg/dm^3, SEAL FREE, DIRECTION OF ROTATION CLOCKWISE, BEARING/LUBRICATION GLYCERIN 99,5, CASING SUPPORT FEET, **FLANGES** SUCT-SIZE/POSITION 65NB (TOP), SUCT DRILLING STAINLESS STEEL-DIN 2633 PN16, DISCH SIZE/POSITION 65NB (BOTTOM), DISCH DRILLING STAINLESS STEEL-DIN 2633 PN16, **MATERIALS** PUMP CASING EPOXY COATED MILD STEEL, VIEWING COVER PLEXIGLAS/STEEL,ROTOR DUCTILE IRON, SHOES CAST IRON, SHAFT STAINLESS STEEL, HOSE RUBBER (EPDM), HOSE INSERTS STAINLESS STEEL, PAINTING FOR A HIGHLY CORROSIVE ENVIROMENT.	MOUVEX	2	WAT
Power Unit 1/2/3/4/5/6 Ammonia Dosing Pump 011/021		0 0GDN06/070/08/09/10/11 AP011/021	DIAPHRAGM PUMP, DMH 170-50 B-SS/E/SS-X-O1A1A1	GRUNDFOS	6	WAT
Filtered Water Tanks Caustic Dosing Pump 011/021	0633959	0 0GDN26 AP011/021	DIAPHRAGM PUMP, DMH 24-10 B-PP/E/T-X-O1B3B3	GRUNDFOS	3	WAT
RO 2 Caustic Dosing Pump 011/021	0633958	0 0GDN27 AP011/021	DIAPHRAGM PUMP, DMH 67-10 B-PP/E/T-X-O1B4B4	GRUNDFOS	3	WAT
RO 2 Caustic Dosing Pump 011/021	727246	0 0GDN27 AP013/023	DIAPHRAGM PUMP, DDA 7.5-16FCM-PV/T/C-F-31U2U2FG	GRUNDFOS	3	WAT
UF CEB Caustic Dosing Pump 011/021	0633957	0 0GDN28 AP011/021	DIAPHRAGM PUMP, DMH 1150-10/2 B-PP/E/G-X-O1B5B5	GRUNDFOS	3	WAT
Neutralisation Sump Caustic Dosing Pump 011/021	0633954	0 0GDN30 AP011/021	DIAPHRAGM PUMP, DMH 550-10 B-PP/E/T-X-X7B4B5	GRUNDFOS	3	WAT
UF Feed Caustic Dosing Pump 011/021	0633953	0 0GDN31 AP011/021	DIAPHRAGM PUMP, DMH 46-10 B-PVC/E/T-X-O1B1B1	GRUNDFOS	3	WAT
Filtered Water Supply Pump 001/011		0 0GDN40 AP001/011	CENTRIFUGAL PUMP, MODEL EBARA PRA150T, STAGE 1, HORIZONTAL,FLOW RATE 1 m^3/Hr, HEAD (DIFF PRESSURE) 77 m, PUMP SPEED 3000 RPM, DESING PRESURE 1.2 MPa, IMPELLER DIA + FORM 77mm, LIQUID CLEAN WATER, DESIGN TEMP 80°C, POWER 1.1 KW, VISCOSITY 1 mm^2/s, DENSITY 1 Kg/dm^3, SHAFT SEAL MECHANICAL, DIRECTION OF ROTATION CLOCKWISE, SEALED BALL BEARING, IMPELLER TYPE PERIPHERAL TURBINE, CASING SUPPORT FEET, **FLANGES** SUCT-SIZE/POSITION 25 MM/1 INCH BSP, SUCT DRILLING FEMALE THREADED, DISCH SIZE/POSITION 25 MM/1 INCH BST, DISCH DRILLING FEMALE THREADED, **MATERIALS** PUMP CASING & DISCHARGE COVER CAST IRON, IMPELLER BRASS CASING WEAR RING AISI 304, SHAFT CARBON STEEL-AISI 303 (WET EXTENSION), SHAFT SEAL CERAMIC/CARBON GRAPHITE, PEDESTAL CAST IRON.	ZILMET	2	WAT
Raw Water Inlet Sulphuric Dosing Pump 011/021	0633960	0 0GDE08 AP011/021	DIAPHRAGM PUMP, 95715837/DMH 67-10 B-PV/T/T-X-O1B4B4	GRUNDFOS	3	WAT
Neutralisation Sump Sulphuric Dosing Pump 011/021	0633956	0 0GDE09 AP011/021	DIAPHRAGM PUMP, DMH 550-10 B-PV/T/T-X-X7B4B5	GRUNDFOS	3	WAT
UF CEB Sulphuric Dosing Pump 011/021	0633955	0 0GDE10 AP011/021	DIAPHRAGM PUMP, DMH 1500-4/2 B-PV/T/T-X-O1B5B5	GRUNDFOS	3	WAT
RO 1 Sulphuric Acid Dosing Pump 011/021		0 0GDE11 AP011/021	DIAPHRAGM PUMP, DMH, P/N 253-67-10173, HEAD PRESSURE 1000 KPa, HEAD TEMP 60°C, STROKE FREQUENCY 96/SEC, STROKE	GRUNDFOS	3	WAT

			AND FREQUENCY ADJUSTMENT MANUAL, MIN AND MAX FLOWRATE 6.7 L/H, POWER @ MAX STROKE 0.16 KW, **NOZZLE: SUCTION & DISCHARGE** SIZE 1 ¼', RATING 10, **MATERIAL**: PUMP HEAD PVDF, DIAPHARM PTFE, PLUGER/PISTON CARBON STEEL, **VALVE**: SEAT AND BALL PTFE, BODY PVDF, GASKET PTFE, **RELIEF VALVE:** CASING FORGED STEEL, SEAT PTFE, SPRING STAINLESS STEEL, BARING HOUSING ALUMINIUM			
RO 1 Sulphuric Acid Dosing Pump 013/023	0698436	0 0GDE11 AP013/023	DIAPHRAGM PUMP, DDA 7.5-16FCM-PV/T/C-F-31U2U2FG	GRUNDFOS	3	WAT
Cooling Tri-Sodium Phosphate Dosing Pump 021/041		0 0GDN50 AP021/041	DIAPHRAGM PUMP, 95723386/DMH 100-10 B-PVC/V/G-X-O1B2B2	GRUNDFOS	3	WAT
Tolyltriazole Dosing Pump 021/041	0643812	0 0GDN51 AP021/041	DIAPHRAGM PUMP, 95723386/DMH 100-10 B-PVC/V/G-X-O1B2B2	GRUNDFOS	3	WAT
UF Feed Coagulant Dosing Pump 051/061	0633952	0 0GDN54 AP051/061	DIAPHRAGM PUMP, DMH 5,0-10 B-SS/T/SS-X-O1AA	GRUNDFOS	3	WAT
RO 1 Antiscalant Dosing Pump 051/061	0633951	0 0GDN55 AP051/061	DIAPHRAGM PUMP, DMH 13-10 B-PVC/V/G-X-O1B1B1	GRUNDFOS	3	WAT
UF CEB Hypochlorite Dosing Pump 051/061	0633950	0 0GDN60 AP051/061	DIAPHRAGM PUMP, DMH 1500-4/2 B-PVC/V/G-X-O1B8B8	GRUNDFOS	3	WAT
RO SMBS Dosing Pump 051/061/071		0 0GDN70 AP051/061/071	DIAPHRAGM PUMP, DMH 100-10 B-PP/V/G-X-O1B4B4	GRUNDFOS	3	WAT
Sludge Thickeners Coagulant Dosing Pump 051/061/071		0 0GDN75 AP051/061/071	DIAPHRAGM PUMP, DMH 100-10 B-SS/E/SS-X-O1A1A1	GRUNDFOS	3	WAT
Sludge Thickeners Sludge Waste Pump 011/021/031	0755574	0 0GDS03 AP011/021/031	POSITIVE DISPLACEMENT PUMP, NEMO NM045BY, FLOW RATE 8.1 m^3/h, SPEED 216 RPM, POWER 0.98 KW, EFFICIENCY 62 %, MOTOR 3 KW-4P; HEAD PRESSURE 29 m, HORIZONTA, LIQUID SLUDGE, TEMP AMBIENT, VICOSITY 50 – 100 mPa, DENSITY 0.95 – 1.05 Kg/dm^3, SHAFT SEAL MECHANICAL TYPE MG1-G60, DIRECTION OF ROTATION CLOCKWISE, BEARING/LUBICATION PIN JOINTS/MINERAL OIL, IMPELLER TYPE HELICAL, CASING SUPPORT SUPPLIED ON BASE PLATE, **FLANGES** SUCT-SIZE/POSITION DN80/PN16, DRILLING DIN2501, DISCH SIZE/POSITION DN80/PN16, DRILLING DIN2501 **MATERIALS** PUMP CASING CAST IRON GG25, DISCHARGE COVER CAST IRON GG26, IMPELLER/ROTOR 1.2435 HARDENED TOOL STEEL, STATOR NEMOPLAST O65L, SHAFT1.2435 HARDENED TOOL STEEL , PEDESTAL STEEL, PAINITING MANUFACTURE STANDARD	NETZCH	3	WAT
Chemical Transfer Pump 021/031	0732003	0 0GDN85 AP021/031	DIAPHRAGM AIR PUMP, MODEL WILDEN P100 (No: 01-10803), 1 STAGE, FLOWRATE MORMAL 2.85 m^3/h, DELIVERY PRESSURE 100 Kpa, SPEED (CYCLE PER MINUTE) VARIABLE DEPENDING ON AIR FLOW VOLUME, DIAPHRAGM TYPE WIL-FLEX (SANTOPRENE), LIQUID MIXED CHEMICALS, TEMP AMBIENT, SG 1.1, AIR SUPPLY 34 Nm/Hr @ 410 KPa, HORIZONTAL/VETICAL, CASING MATERIAL POLYPROPERLENE, CASING SUPPORT FEET, CONNECTION SIZE: SUCT ½ INCH BSP, DISCH ½ INCH BSP, AIR IN ¼ NPT AND OUT ½ INCH BSP.	WIDEN	3	WAT
Vacuum Pump 011/021/031/041	663220	0 0GDK46 AP011/021/031/041	VACCUM PUMP, LPHX 65327 AB AG1 4B 1 LIQUID RING VACUUM PUMP, **SUCTION** MEDIUM GAS >95 % WITH SMALL TRACES OF O_2 & CO_2, FLOWRATE 400 m_3/Hr, PRESSURE 0.06 BAR abs, DISCHARGE PRESSURE 0.9 BAR,INLET TEMP 28 °C, OUTLET TEMP 38 °C, **DELIVERY** MEDIUM GAS >95 % WITH SMALL TRACES OF O_2 & CO_2, FLOWRATE 2.5 m_3/Hr, PRESSURE 0.9 BAR abs, TEMP 38 °C, POWER 14 KW, SPEED 1465 RPM, HORIZONTAL, SHAFT SEAL MECHANICAL DIN EN 12756, 2 X GREASE ANTIFRICTION BEARINGS, IMPELLER TYPE/FREE PASSAGE VANE WHEEL, CASING SUPPORT FRAME, FLANGES: GAS INLET DN 65/DIN 2633C, OUTLET DN 100/DIN 2633C, OUTLET DN 50/DIN 2633C, MAKE UP WATER PUMP DN 25/DIN 2633C, DRAIN DN 25/DIN 2633C, **PUMP MATERIAL** VACCUM CASING 1.4408 EN10283, CENTRAL BODY 1.4408 EN10284, IMPELLER 1.4517 EN10756, MECHANICAL SEAL GBVGG EN12756, SHAFT 1.4404 EN10088-1, SHAFT SEAL RING/O RING VITON A DIN ISO 1629, SELF ALIGNING ROLLER BEARINGS 1.301 DIN 635	SIHI GERMANY (SPP PUMPS)	4	WAT
HCL Transfer Pump 001/011	0622842	0 0GDE20 AP001/011	DIAPHRAGM AIR PUMP, MODEL VA08 PP NULL PP TF (810.0616), 1 STAGE, FLOWRATE MORMAL 0.5 m^3/Hr – MAX 1 m^3/Hr, HEAD (DIFF PRESSURE) 31 m, DISCHARGE LINE LOSSES 6.9 m/79.1 Kpa, SUCTION PRESSURE MAX - 11.46 (ASSUMING 1 m HEIGHT DEFFERENCE BETWEEN LIQUID LEVEL AND PUMP SUCTION), SUCTION PRESSURE RATED - 28.70 Kpa (ASSUMING DRY SUCTION LINE), SPEED DEPENDS ON AIR FLOW VOLUME, DIAPHRAGM TYPE PTFE, LIQUID HYDROCHLORIC ACID ± 34 %	VERDER PUMPS SA	6	WAT

			CONCENTRATION, TEMP AMBIENT,VISCOSITY 1.9 mPa.s, DENSITY 1169 Kg/m^3, AIR CONSUMPTION 0.17 m^3/Hr @ 500 L/Hr, HORIZONTAL/VETICAL, CASING MATERIAL POLYPROPERLENE, CASING SUPPORT: SUPPLIED ON BASE TO BE BOLDED DIRECTLY TO SKID-M6 FASTENERS, CONNECTION SIZE: SUCT ¼ INCH, DISCH ¼ INCH, AIR IN ¼ NPT.			
Polymer Dosing Pump 011/021/031	0754871	0 0GDN80 AP011/021/031	POSITIVE DISPLACEMENT DIAPHRAGM PUMP, MODEL NEMO NM021BY, STAGE 1, HORIZONTAL,FLOW RATE 1 m^3/Hr, HEAD (DIFF PRESSURE) 20 m, PUMP SPEED 239 RPM, EFFICIENCY 62 %, LIQUID POLY ELECTROLYTE 0.7% tig, TEMP AMBIENT, POWER 0.3 KW, MOTOR SIZE 0.75 KW-4P, VISCOSITY 50 – 100 mPa, DENSITY 1 – 1.1 Kg/dm^3, SHAFT SEAL MECHANICAL TYPE MG1-G60, DIRECTION OF ROTATION CLOCKWISE, BEARING/LUBICATION PIN JOINTS/MINERAL OIL, IMPELLER TYPE HELICAL, CASING SUPPORT SUPPLIED ON BASE PLATE, **FLANGES** SUCT-SIZE/POSITION DN32/PN16, DISCH SIZE/POSITION DN32/PN16, **MATERIALS** PUMP CASING CAST IRON GG25, DISCHARGE COVER CAST IRON GG26, IMPELLER/ROTOR AISI 316, STATOR NEMOPLAST O65L, SHAFT AISI 316, PEDESTAL STEEL, PAINITING MANUFACTURE STANDARD.	NETZCH	3	WAT
Neutralisation Sump Temporal Pump	0716822	0 0GDK76	PUMP: TYPE: SUBMISSIBLE; SIZE: 25 M; CAPACITY: 2500 L/MIN; SPEED: 1450 RPM; RATING: 30 KW; DRIVER: ELECTRICAL MOTOR; APPLICATION: NEUTRALISATION SUMP WATER; SUPPL P/N: 350CP ( ) 150H100Z	CHEMICAL PUMPS	5	WAT
Mobile plant						
SMBS Dosing Pump	0750070	0 2GDN01 AP011/021	DIAPHRAGM PUMP, MEMDOS LB 35, P/N 10407417, CAPACITY 0 – 10 L/Hr, PRESSURE 200 KPa, MOTOR 0.05 KW, PTFE DIAPHRAGM.	Lutz – JESCO	3	WAT
Antiscalent Dosing Pump	0750343	0 2GDN05 AP011/021	DIAPHRAGM PUMP, MAGDOS LT 06, P/N 10208338, MATERIAL PVC/FPM, CAPACITY 03 – 10 L/Hr, PRESSURE 200 KPa, MOTOR SS-316, 0.05 KW.	Lutz – JESCO	3	WAT
Caustic Dosing Pump		0 2GDN10 AP011/021	DIAPHRAGM PUMP, MEMDOS E 15, P/N: 10402188, S/N: 104E0004408, CAPACITY 0 – 60 L/Hr, PRESSURE 200 KPa, MOTOR 0.05 KW, SS-316.	Lutz – JESCO	3	WAT
Sulphuric Acid Dosing Pump	0750043	0 2GDE01 AP011/021	DIAPHRAGM PUMP, MEMDOS E 25, P/N: 10403150, S/N: 104E0008674, CAPACITY 0 – 50 L/Hr, PRESSURE 200 KPa, MOTOR 0.05 KW, PTFE DIAPHRAGM	Lutz – JESCO	3	WAT
CPP						
Acid Injection Pump	0715381	0 0LDN11/12 AP001	CHEMICAL INJECTION PUMPS, Piston Operated Diaphragm with inbuilt VFD, MODEL No: PKG144M100H3/9.C5.HS.HH3.	MILTON ROY	3	CCP
Caustic Injection Pump	0715394	0 0LDN21/22 AP001	CHEMICAL INJECTION PUMPS, Piston Operated Diaphragm with inbuilt VFD, MODEL No: PL96P115H3/9.C5.HH3	MILTON ROY	2	CCP
Low Conductivity Effluent Sump Pump	729166	0 0LDR11/12 AP001,	SELF PRIMING PUMP, MODEL No: ROTARY LOBE PUMP TYPE PL200 NO 10100276 1.1-2, CODE EIADDCDFA3NZ, DESIGN CAPACITY 30 m^3/h, DIFFERENTIAL PRESSURE 23 m, POWER @ MAX IMPELLER 4.64 KW	BORGER	2	CCP
U1/2/3/4/5/6 WET SMPL CNDTN CTRL U1/2 PUMP		1/2/3/4/5/6 1/LDK10/20 AP001	CENTRIFUGAL PUMP; MP 244 AS2.5x1.5; BN-CARBCM SEAL 6.6 DIA; 7 ½ HP TEFC 2900 RPM; 3/50/380 V; P/N 9625905; S/N 3414J1615503.	SENTRY EQUIPMENT	6	CCP
STP						
Ferric Chloride/Coagulant Dosing Pump 001/002		0 0GRN10 AP001/002	DIAPHRAGM PUMP, MODEL DMX 35 – 10, DUTY 0 – 150 L/Hr, MOTOR 0.05 KW, VOLTAGE 400 V 50 HZ	ALLDOS	2	STP
Supernatant Pump 01/02	0528078	0 0GQB20 AP001/002	FLYGT SUBMERSIBLE CENTRIFUGAL PUMP, MODEL No: CP3045.181 HT252 – 1.2 KW, 80U2-1.5, 30 m^3/h	TSURUMI PUMP	3	STP
Booster Water Pumps 01/02		0 0GRK10 AP001/002	CENTRIFUGAL PUMP, MOTOR 0.75 KW VOLTAGE 415V/3/PHASE, COMPLETE WITH PVC PIPNG & SUCTION/DELIVERY VALVES, Y STRAINER	GRUNDFOS	3	STP
Sewage Forwarding sump 1 Primary Pumps	0640098	0GRK51/52 AP001/2	FLYGT SUBMERSIBLE CENTRIFUGAL PUMP; SIZE: 100 MM; CAPACITY: 144 M/HR; SPEED: 1465 RPM; RATING: 23.25 M; POTENTIAL: 400 V; APPLICATION: WASTEWATER; SUPPL P/N: NP 3153 HT3-455; REFERENCE NO: 3153.181-096 0393; SEMI PERMANENT; 7.5 KILOWATT; CURRENT 16 AMP; IMPELLER TYPE SELF CLEANING; SEMI-OPEN; CHANNEL IMPELLER; WET; INSTALLATION ON STAIONARY DISCHARGE FLANGE VIA TWINGUIDE RAILS;	TSURUMI PUMP	3	STP
AUX COOLING						
Sulphuric Acid Cooling North/South Dosing Pump 021/041		0 0GDE25/30 AP021/041	DIAPHRAGM PUMP, DMH 13-10 B-PV/T/T-X-O1B3B3	GRUNDFOS	6	AUX
Corrosion inhibitor Cooling North/South Dosing Pump 1/2		TBA	DIAPHRAGM PUMP, DDA 7.5–16 FCM-PV/T/C-F-31/001FG	GRUNDFOS	8	AUX

Bio-dispersant Cooling North/South Dosing Pump 1/2		TBA				
Biocide Cooling North/South Dosing Pump 1/2		TBA	DIAPHRAGM PUMP, DMH 100-10 B-PP/V/G-X-01B4B4; TYPE DMH-253; 100 L/H; 10 BAR; 50 HZ.	GRUNDFOS	4	AUX
COMPRESSORS						
Air Blowers		0 0LDC11/12/13 AN001	ROOT TYPE AIR BLOWER, MODEL No: ROBUSCHI ES35/1C, S/N 10 00892/3/4, MOTOR 19KW (2 POLE)	HOWDEN	2	CCP
U1/2/3/4/5/6 WET SMPL CNDTN CTRL U1/2 CMPR		1/2/3/4/5/6 1/LDK11/12 AN001	COMPRESSOR; COPELAND SCROLL WITH CORESENSE TECHNOLOGY; MODEL ZP182KCE-TED-455; SERIAL 18DC7257D; R-410A USE ONLY.	SENTRY EQUIPMENT/EMERSON CLIMATE TECHNOLOGES	6	CCP
Nitrogen PSA 2 Compressor		0 0QJD02 AN001	SCREW AIR COMPRESSOR, MODEL No: RS30 – 371/ RS301 – A10, S/N UCV1019814, 30 KW, 400V, MAWP: 10 BAR.	INGERSOLL RAND INDUSTRIAL TECHNOLOGY	1	WAT
OXYGEN PSA Compressor		0 0QJB20 AN001	SCREW AIR COMPRESSOR, MODEL No: R4 – 111/ R111 – A8.5, S/N UCV1019989, 11 KW, 400V, MAWP: 11 BAR.	INGERSOLL RAND INDUSTRIAL TECHNOLOGY	1	WAT
Mobile plant Compressor		0 2CFL01 AN001	COMPRESSOR, Piston, Model LE5 – 10CV TM270 400/3/50 CE, S/N ITR1431434, 3.85 KW, MAWP 11 BAR, Motor Speed 1500 rev/min, 3 Phase, 50Hz, 8.4 l/s	ATLAS COPCO	2	WAT
Air blower units		0 0GRP10 AN001/002	AIR BLOWER, MODEL URAI 33 C/W SOUND ENCLOSURE, VOLTAGE 7.5 KW 400V 2 POLE, 258 NM^3/HOUR @ 65 KPa	DRESSER ROOTS/ SOWERBY ENGINEERING	2	STP
Sewage Treatment Plant Air Compressor		0 0SCA10/20 AN001	AIR SUPREME COMPRESSOR, MAKE FINI, MODEL NO: SKM12-3M 200 LT (BELTDRIVEN). CAPACITY: 323 LT, DISCHARGE PRESSURE: 10 BAR; VOLTAGE 220 V; MOTOR 2.2 KW	AIR SUPREME	3	STP
GEARBOXES						
Sludge Thickener 01 Rake 005/015		0 0GDS01 AM005/015	GEARBOX, Model DF128-Z38-K4-(71), ASORBED POWER 0.25 KW, SERVICE FACTOR 3.1 TORQUE, OUTPUT POWER 0.55 RMP, OUTPUT TORQUE $t_{2normal}$ 1000 Nm, OUTPUT SHAFT d_2 70 SOLID, OUTPUT FLANGE DIEMETER 350, MAX TORQUE T2 3100 Nm, AMBIENT TEMP MIN 5°C MAX 19°C	SIEMENS	3	WAT
Sulphuric Acid Mixer 02/03		0 0GDE02/03 AM001	GEARBOX: TYPE SEW: 1087; RATIO: 11.9; SPEED: 1440/121 RPM; SPEED RATIO 11.9; POWER: 1.1 KW; BEARING SIZES -GEARBOX 6308/6220 DE/NDE; REFERENCE NO: C21573/02/A&B; SUPPL P/N: C21573/02/A&B; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF AND MOTOR ADAPTER 90 FOR STANDARD FLANGED MOTOR FRAME SIZE 90.	MIXTEC	2	WAT
Ammonia Mixer 02/03/04		0 0GDN02/03/04 AM001	GEARBOX TYPE SEW; MODEL TYPE: 1000; MODEL NO: 1087; POWER: 1.1KW; SPEED: 1440/121 RPM; SPEED RATIO 9.39; SERVICE FACTOR: 6.36 BEARING SIZES -GEARBOX 6206/6208DE/NDE; MIXER GEARBOX; REFERENCE NO: C21573/09/A,B&C; SUPPL P/N: C21573/09/A,B&C; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF AND MOTOR ADAPTER 90 FOR STANDARD FLANGED MOTOR FRAME SIZE 90.	MIXTEC	2	WAT
Caustic Mixer 21/22		0 0GDN21/22 AM001	GEARBOX TYPE SEW; MODEL TYPE: 1000; MODEL NO: 1087; POWER: 1.1KW; SPEED: 1440/121 RPM; SPEED RATIO 11.9; SERVICE FACTOR: 6.36 BEARING SIZES -GEARBOX 6206/6208 DE/NDE; MIXER GEARBOX; REFERENCE NO: C21573/09/A,B&C; C21573/10/A&B SUPPL P/N: C21573/09/A,B&C; C21573/10/A&B; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF AND MOTOR ADAPTER 90 FOR STANDARD FLANGED MOTOR FRAME SIZE 90.	MIXTEC	2	WAT
Tri-Sodium Phosphate Mixing Tank 011 Mixer 011	0635383	0 0GDN50 AM011	GEARBOX: TYPE: 1027 HELICAL MIXER; RATIO: 6.56; SERVICE FACTOR 6.49; SPEED: 212 RPM; POWER: 0.37 KW; BEARING SIZES - GEARBOX 6206/6208DE/NDE; REFERENCE NO: C71573/03/A&B; SUPPL P/N: C21573/03/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF AND MOTOR ADAPTER 71 FOR STANDARD FLANGED MOTOR FRAME SIZE 71.	MIXTEC	3	WAT
Tolyltriazole Mixing Tank 011 Mixer 011		0 0GDN51 AM011				
Coagulant Mixer 011	0635384	0 0GDN54 AM011	GEARBOX: SEW TYPE: 1027 HELICAL MIXER; SPEED RATIO 9.33; SPEED: 1400/149 RPM; POWER: 0.37 KW; SERVICE FACTOR 6.49; BEARING SIZES -GEARBOX 6206/6208DE/NDE REFERENCE NO: C21573/07/00; SUPPL P/N: C21573/07/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF AND MOTOR ADAPTER 71 FOR STANDARD FLANGED MOTOR FRAME SIZE 71.	MIXTEC	1	WAT
Antiscalant Mixer 011	0635382	0 0GDN55 AM011	GEARBOX: TYPE: 1027 HELICAL MIXER; RATIO: 10.43; SPEED: 1440/138 RPM; POWER: 0.55 KW; SERVICE FACTOR 2.85; BEARING SIZES -GEARBOX 6206/6208DE/NDE; REFERENCE NO: C21783/02/A; SUPPL P/N: C21783/02/A; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 80 FORFLANGED MOTOR FRAME SIZE 80.	MIXTEC	2	WAT

Coagulant Mixer 54		0 0GDN54 AM011	GEARBOX; MODEL TYPE: 1000; MODEL NO: 1027; POWER: 0.37KW; SPEED: 1390; SPEED RPM 149; SERVICE FACTOR: 4.86 BEARING SIZES -GEARBOX 6202 – 2RS/6202 – 2RS DE/NDE MIXER GEARBOX; REFERENCE NO: C21783/01/A; SUPPL P/N: C21783/01/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 71 FORFLANGED MOTOR FRAME SIZE 71	MIXTEC	2	WAT
Sodium Chloride Mixer 001		0 0GDN65 AM001	GEARBOX; MODEL TYPE: 1000; MODEL NO: 1027; POWER: 0.37KW; SPEED RATIO 6.56; SPEED: 1390/212 RPM; SERVICE FACTOR: 6.49; BEARING SIZES -GEARBOX 6206/6208DE/NDE; REFERENCE NO: C21573/06/A; SUPPL P/N: C21573/06/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 71 FORFLANGED MOTOR FRAME SIZE 71	MIXTEC	2	WAT
SMBS Mixer 001		0 0GDN70 AM001	GEARBOX; MODEL TYPE: 1000; MODEL NO: 1027; POWER: 0.37KW; SPEED RATIO 9.33; SPEED: 1390/149 RPM; SERVICE FACTOR: 4.86; BEARING SIZES -GEARBOX 6206/6208DE/NDE; REFERENCE NO: C21573/07/A; SUPPL P/N: C21573/07/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 71 FORFLANGED MOTOR FRAME SIZE 71	MIXTEC	2	WAT
Coagulant Mixer 75		0 0GDN75 AM011	GEARBOX; SEW; MODEL TYPE: 1000; MODEL NO: 1027; POWER: 0.37KW; SPEED RATIO 6.56; SPEED: 1390/212 RPM; BEARING SIZES -GEARBOX 6206/6208DE/NDE; REFERENCE NO: C21573/08/A; SUPPL P/N: C21573/08/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 71 FORFLANGED MOTOR FRAME SIZE 71	MIXTEC	2	WAT
Polymer tank mixer 001/003/005		0 0GDN80 AM001/003/005	GEARBOX TYPE SEW; MODEL TYPE: 1000; MODEL NO: 1027; POWER: 0.25KW; SPEED: 1400/149 RPM; SPEED RATIO: 9.33; SERVICE FACTOR: 7.2 BEARING SIZES -GEARBOX 6206/6208DE/NDE; REFERENCE NO: C21573/11/A, B & C; SUPPL P/N: C21573/11/00; TO INCLUDE OUTPUT SHAFT FLANGE COUPLING HALF, AND MOTOR ADAPTER 71 FORFLANGED MOTOR FRAME SIZE 71	MIXTEC	2	WAT
Clarifier Floc Mixer		0 0GDS01 AM001/003/011/013	GEARBOX TYE: SEW; MODEL TYPE: 2000 MODEL NO: 2087; POWER: 2.2; RATED MOTOR SPEED:1455RPM SPEED RATIO: 26,18; SERVICE FACTOR 3.18; BEARING SIZES -GEARBOX: 6308/6220 DE/NDE	MIXTEC	3	WAT
Coagulant Transfer Pump 001/021		0 0GDN74 AP001/021	GEARBOX, Model BREVINI ET3020/MR1/52/00, RATIO 52 TO 1	BREVINI	2	WAT
Polymer Dosing Pump 011/021/031		0 0GDN80 AP011/021/031	GEARBOX, Model NORD SK01FAL-80L/4 TF, RATIO 5.62, SPEED 245 RPM	NORD	3	WAT
Sludge Thickeners Sludge Waste Pump 011/021/031		0 0GDS03 AP011/021/031	GEARBOX, Model NORD SK25F AL-100LA/4 TF, RATIO 6.29, SPEED 225 RPM	NORD	3	WAT
Aerator 01/02/03		0 0GRL01/02/03 AM001	HELICAL FLENGER GEARBOX, MODEL No ZR-168-K2-S200L4-W, REFERENCE NO: JHK-0812-3001323047/3, POWER: 63.64 KW, APPLICATION: SEWEGE TREATMENT SURFACE AERORATOR AGITATOR VERTICAL; ROTATION DIRECTION: BI – DIRECTIONAL MOTOR 30 KW IP55 CAST IRON, VOLTAGE 400 V 3 PHASE 50HZ, RIANHOOD	FLENGER	3	STP

1.3 Interpretation and terminology

The following definitions are used in this Service Information:

Definition	Explanation
Contractor	Service provider contracted for the works as specified in this scope
Employer	Eskom Medupi Power Station

The following abbreviations are used in this Service Information:

Abbreviation	Explanation
DCF	Data Capture Form
SOW	Scope of work
OEM	Original Equipment Manufacture
QCP	Quality Control Plan
IP	Intellectual Property

2 Management strategy and start up.

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

The *Contractor* shall comply with the requirements stated in TSC 3 clause 21. The *Contractor* to provide a plan with timeliness for all refurbishments.

2.2 Management meetings

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

Title and purpose	Approximate time & interval	Location	Attendance by:
Risk register and compensation events	Monthly or as an when the needs arise	Medupi Power Station or MS Teams	*Service Manager* *Contractor* representative(s)
Overall contract progress, feedback and KPI	Monthly	Medupi Power Station or MS Teams	*Service Manager, Employer* Technical representative(s), *Contractor* representative(s)

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

2.3.1 Manpower Requirements

a) The *Contractor* must submit an organogram fourteen calendar days after the *Contrac*t Start Date to the *Service Manager*.
b) The *Contractor* shall utilise/provide skilled and suitably qualified staff with relevant experience.
c) All staff brought onto site in connection with this work scope should be able to fluently speak, understand and write in English.

2.4 Provision of bonds and guarantees

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

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

2.5 Documentation control

All contractual communications will be in the form of properly compiled letters or a message in the email itself. *The Contractor* must comply with the requirements of Eskom document Management system. All documents provided to the *Contractor* shall remain part of the *Employer* asset at the end of the contract.

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
invoiceseskomlocal@eskom.co.za
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;

Requirements

- All Electronic invoices must be sent in PDF format only.
- An Invoice that was printed and then scanned to PDF by the Vendor is not acceptable as this is not an original tax invoice by SARS definition but a copy.
- The following wording needs to appear on the invoice: "Your invoice is encrypted in order to comply with SARS requirements that invoices, and statements sent electronically are tamperproof."
- If there is Cost Price Adjustment (CPA) on your invoice we recommend that you issue a separate invoice for CPA so that if there are any issues on the CPA, the rest of the invoice can be paid while resolving the CPA issues.
- You do not require a goods receipt (GR) number to submit your invoices. When the GR number is received you can then send the GR number to the FSS contact centre at FSS@eskom.co.za or 011 800 5060.
- All queries and follow up on invoice payments should made by contacting the FSS Contact Centre: Tel: 011 800 5060 or email: fss@eskom.co.za

2.7 Contract change management

Refer to NEC TSC Core clause 6, in the event any change to the Contract needs to be managed.
Employer will use the forms with Eskom header for instruction to the *Contractor*.

2.8 Records of Defined Cost to be kept by the *Contractor*

The *Contractor* is required to keep record and submit proof of all the actuals, to be verified at the completion of the Payment Certificate and assessment, should the *Service Manager* request to do so.

2.9 Insurance provided by the *Employer*

Refer to Clause Z12

2.10 Training workshops and technology transfer

The *Contractor* is required to provide on job and classroom training to Eskom employees working on this plant. This shall be completed during the duration of this contract at no additional cost to the *Employer.* The frequency of the training to be agreed by both Parties.

2.11 Design and supply of Equipment

Any modification shall be approved by the *Employer*'s engineer and the documents (including drawings) must be the property of the *Employer*.

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

2.12.1 Equipment

Any equipment (assets) bought during the service period for which the *Employer* has paid will be transferred to the *Employer* at the end of the contract.

2.12.2 Information and other things

If the information and other things are required, it will be discussed by the two Parties, and the provision of information and other things will be mutually agreed upon.

2.13 Management of work done by Task Order

- A Task Order will be issued to the *Contractor* for any work to be executed.

3 Health and safety, the environment and quality assurance

3.1 Health and safety risk management

3.1.1 Introduction

Medupi Power Station responsibility and commitment is to ensure a safe working environment is in line with its Safety, Health, Environmental, and Quality (SHEQ) Policy and applicable legislative obligations. This OHS specification is Medupi power station minimum requirements which are required to be met for the duration of the contract period by appointed *Contractor* and, where required, the delivery organisation. Appointed *Contractor* is expected to develop an OHS plan that meets these requirements as well as all the relevant applicable legislation that they conform to. Medupi Power Station in no way assumes the *Contractor*'s legal responsibilities and liabilities. Appointed *Contractor* is and remains accountable for the quality and execution of their health and safety programme for their employees and appointed *Contractor* employees. This OHS specification reflects minimum requirements and should not be construed as all-encompassing.

3.1.2 Section 37(2) (Legal) Agreement

A section 37(2) agreement must be signed between Eskom and the main *Contractor* at the time of submitting the safety file. The main *Contractor* must ensure that a section 37(2) agreement is compiled between the main *Contractor* and all their appointed *Contractor*s for the contract. The original copy of the section 37(2) agreement must be retained by the *Contractor*, and a copy must be retained by the *Service Manager*. A copy of all the agreements must form part of the respective *Contractor*'s OHS file.

3.1.3 COID

The Appointed *Contractor* and all his/her appointed *Contractor*s shall be registered with an appropriate employment compensation commissioner and have available a valid letter of good standing (LoG) from such commissioner. The obligation lies with the *Contractor*s to ensure that the LoG remain valid throughout the contract period. A copy of the LoG must be filed in the *Contractor* OHS files.

3.1.4 Legislative Compliance

The Appointed *Contractor* will comply with all the legislation pertaining to this contract being:
The Main *Contractor* and all appointed *Contractor*s will comply with all the legislation pertaining to this project being:

- The Constitution of the Republic of South Africa (particularly Section 24 of the Bill of Rights).
- Occupational Health and Safety Act 1993 (Act 85 of 1993) and its Regulations.
- National Environmental Management Act 1998 (Act 107 of 1998).
- Environment Conservation Act 1989 (Act 73 of 1989).
- National Water Act 1998 (Act 36 of 1998).
- Civil and Building Work Act.
- National Road Traffic Act 93 of 1996.
- Compensation for Occupational Injures and Diseases Act.
- SANS Standards –*Contractor* shall use the relative standards applicable to the project.

3.1.5 Eskom Life-saving Rules

1. Eskom places a high value on health and safety and urges every organization that undertakes work for Eskom to do the same.
2. Eskom has developed five life-saving guidelines that will apply to all Eskom Medupi Power Station employees, agents, consultants, and *Contractor*s. Any Eskom employee or employee of a Main *Contractor* or appointed *Contractor* who fails to follow these rules would be deemed a serious violation. These rules are in place to protect any employee, labour broker, or *Contractor* working from significant injury or death.
3. If any contractual work (including delivery of any product) is to be undertaken on Eskom Medupi Power Station premises, the rules shall be obeyed by any *Contractor* and their employees.

The rules are:

RULE	DESCRIPTION OF RULE
Rule 1	**OPEN, ISOLATE, TEST, EARTH, BOND, AND/OR INSULATE BEFORE TOUCH** (That is plant, any plant operating above 1000 V)
Rule 2	**HOOK UP AT HEIGHTS** Working at height is defined as any work performed above a stable work surface or where a person puts himself/herself in a position where he/she exposes himself/herself to a fall from or into.
Rule 3	**BUCKLE UP** No person may drive any vehicle on Eskom business and/or on Eskom premises: Unless the driver and all passengers are wearing seat belts.
Rule 4	**BE SOBER** No person is allowed to be under the influence of intoxicating liquor or drugs while on duty
Rule 5	**PERMIT TO WORK** Where an authorisation limitation exists, no person shall work without the required permit to work.

Eskom Medupi Power station will take a zero-tolerance approach to these rules.
Noncompliance to Life-saving rules is regarded serious misconduct and will result in serious disciplinary action, which may include dismissal.
This is to ensure that everyone who works on or visits Eskom Medupi Power Station facility returns home to their families safely.

3.1.6 Induction training

1. The Appointed *Contractor* shall ensure that all his / her employees, appointed *Contractor*s and their employees have undergone the Eskom OHS induction training prior to commencing work on site.
2. Attendance registers must be completed of any induction training given, which must indicate that they have received and understood the induction training.
3. Prior to attending the induction training, all employees must undergo a pre-employment medical examination and found fit for duty. A copy of the certificate of fitness must be kept in the OHS file on site for the duration of the contract.
4. All employees and visitors on site shall carry the proof of induction training in the form of access cards.
5. It is the *Contractor*'s responsibility to keep records of induction training.

3.1.7 Risk Assessments

It is a legal requirement in terms of Section 8 (2)(d) of the OHS Act for an employer to carry out risk assessments, to establish which risks and hazards are attached to the health and safety of persons due to any work which is performed, any article or substance which is, handled, stored, transported. A risk assessment is defined as an identification of the hazards associated with the scope of work and an estimate of the extent of the risks involved, considering whatever precautions are already being taken. It is essentially a three-stage process:

- identification of all hazards;
- evaluation of the risks;
- Measures to control the risks.

Risk assessments are required to be maintained. This means that significant changes to a process or activity, or any new process or activity should be subjected to a risk assessment and that if new hazards come to light during the work process, then these should also be subjected to risk assessments. Risk assessments for long term processes should be periodically reviewed and updated. Method statements or written safe work procedures are an effective method as information and record of the way jobs / tasks must be performed. Daily or issue based or task specific or on the job risk assessments must be conducted at the place where work is to be performed/ conducted to allow managers and employees to assess any inherent risks that could have been overlooked during the initial risk assessment or any changes that might have

occurred in a period of absence. For example, if a job / task is extended over a day or halted due to inclement weather.

3.1.8 Vehicle Management

1. It is the responsibility of the driver to ensure:
    a. Their passengers wear seat belts whilst the vehicle is in motion.
    b. Comply with all traffic road rules, safety, direction and speed signs.
    c. Ensure that vehicle loads are properly secured prior to moving off.
    d. Ensure that vehicles are not overloaded.
2. No persons maybe transported at the back of the bakkie.
3. Drivers are required to conduct the route risk assessment prior to travelling/driving.
4. No drivers or operators may text, talk on cell phones or two-way radios whilst driving.
5. All drivers shall have a valid medical fitness certificate.
6. The First aid box with valid contents and fire extinguishers must be included in the vehicle, be services annually and inspected monthly. Drivers must be trained on how to use the First aid box and fire extinguishers.
7. Two triangles must be included in the vehicle and the emergency number be displayed at the back of the vehicle.
8. Each Project site that is enclosed by demarcation will have system/ process to manage vehicle access to site.
9. *Contractor* must maintain their vehicles in a roadworthy condition and a vehicle license must be valid at all times and this is applicable to yellow plant.
10. Drivers of light vehicles must avoid stopping or parking in the vicinity of machines. At least 30 (thirty) meters must be left clear between such a vehicle and such a machine.
11. *Contractor* vehicles can be subject to inspections by the Client/Agent's representative. Vehicles which are not roadworthy will not be permitted to be used on site.
12. Drivers/operators shall be responsible for the travel-worthiness of all loads conveyed by them. Precautions shall be taken to secure all loads properly. Loads projecting from vehicles shall be securely loaded and in daytime a red flag and during darkness a red light or red reflective material shall be attached to the extreme end of such projecting materials.

3.1.9 Personal Protective Equipment Requirements

1. The Main *Contractor* must provide a detailed programme that includes the issuing, maintenance and replacement of PPE for all his employees and appointed *Contractor*s on site.
2. All *Contractor*s shall comply with the requirements of GSR 2 of the OHS Act and PPE Specification Standard 240-44175132.
3. The risk based PPE matrix must be compiled detailing the types of PPE that is required to be issued to employees performing the respective tasks.
4. If there are exceptional circumstances in which certain activities necessitate the use of additional PPE, a risk assessment must be done, in which such PPE requirements will be determined and issued.
5. All *Contractor*s shall ensure that their visitors wear and use the correct PPE whilst on worksites.
6. Where PPE is required and visitors are not in possession of, then it is the individual *Contractor*'s responsibility to provide the PPE.
7. All PPE purchased and used by all *Contractor* employees including visitors must comply with the relevant SANS standards.
8. Where deemed as a requirement (as per risk assessment), then high visibility vests shall be worn.
9. Monthly inspection records of PPE must be kept in the Safety file
10. The *Contractor* shall provide training to his/her employees on the correct use, care and maintenance of PPE and keep the record.

3.1.10 Incident Management

All incidents shall be investigated in terms of OHS Act General Administrative Regulations 8 and 9, using Medupi Power Station Procedure 32-95 OHS incident management as a reference, and where injuries as contemplated in sections 24 and 25 have been sustained, be reported to the Department of Employment and Labour.
*Contractor*s shall use the Medupi Power Station Flash report to report incidents immediately or before end of shift. The standard General Administrative Regulation Annexure 1 "Recording of an Incident form" for all incident investigation reports. The objective of incident investigation should not only be a legal requirement

but should establish why and how the incident occurred and find out the real root cause of the incident and to decide on precautionary measures that are required to address the root cause to prevent any further recurrences of the same or similar incidents. The following must be taken into consideration to ensure compliance to Eskom Incident Management Procedure:

- All incident to be reported before end of the shift
- Ensure compliance to Medupi Power Station Incident Management Process
- Ensure compliance to Eskom Incident Management Procedure (32-95)
- All incidents must be investigated within seven (7) working days
- Appointed incident investigation chairperson must have the necessary competency to fulfil that function

3.1.11 Emergency Management

The art of emergency preparedness and response is to minimise the effects of any emergency and to restore normal activities as soon as possible. The *Contractor* must develop and align their own Emergency response plan with Medupi Power Station's to address any emergency which might arise at any given point in time. The *Contractor* to familiarise themselves with the Medupi Power Station emergency response plan and procedure. Periodic emergency drills must be undertaken to test the effectiveness of their plan. This must be recorded and provided on request.

3.1.12 Non-Conformance and Compliance

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

3.1.13 OHS FILES

1. OHS file means documents or records in permanent form, containing the information about the safety and health management system from inception, execution to completion of works.
2. All *Contractor*s are required to keep the OHS file on every project site. If there is more than one site per project, a file per site shall be kept at that site. *Contractor*s may keep additional files at their head office as additional records. The OHS file shall be maintained by all the *Contractor*s on their project sites and shall be available on request for audit and inspection purposes.
3. The OHS file shall consist of the OHS documentation/information in line with the OHS requirements/specification, legal and other requirements.
4. The sequence of filing the documentation must be kept in the same sequence as listed in this OHS requirements /specification and the OHS plan.
5. Each record shall be separated by partitions to afford easy identification and access. Each partition must be labelled.
6. On completion of the work/project, the main *Contractor* must hand over a consolidated health and safety file to the project manager.
7. In case where the project is extended, should the documentation in the OHS files become cumbersome, the older documentation must be archived in boxes which shall be correctly labelled and be available for auditing purposes. The archived documentation must be handed over at the completion of the project.

3.1.14 Work Stoppage

1. Any person may stop any activity where an unsafe act or unsafe condition that poses or may pose an imminent threat to the safety and health of an individual or create a risk of degradation of the environment. This includes any unauthorised work or service performed by, or legally or contractually non-compliant acts or omissions by, any contractor contracted to work at that site.
2. Work stoppages that are initiated due to OHS concerns, non-compliance, or poor performance related to the contractor's works or services shall not warrant any financial compensation claim lodged against Medupi Power Station where the contractor has not met the requirements defined legally or contractually.
3. Where stoppages are carried out, the required non-conformance report shall be raised.
4. All work stoppages ideally should be investigated and documented by contract custodians.

3.1.15 Eskom's Right to Terminate the Contract

The *Contractor* shall at all times comply with Medupi Power Station's occupational health and safety (OHS), legal and other requirements as amended for the duration of the contract. In addition, the *Contractor* shall comply with the requirements contained in the SHE Specification. Medupi Power Station reserves the right to terminate the contract in the event that the *Contractor* has built up a history of poor performance or non-conformance in relation to matters of Medupi Power Station OHS and legal compliance. No work may commence until the health and safety file has been approved by Medupi Power Station OHS personnel.

3.2 Environmental constraints and management

3.3.1 Environmental Management

- The *Contractor* shall have a documented and implemented environmental management system e.g., environmental policy, operational procedures relating to their activities, aspects/impacts register etc.
- The *Contractor* shall prepare an environmental management plan relating to their activities that will be carried out. The environmental management plan shall be based on, amongst others, Eskom Medupi Power Station's OEMP and any other applicable environmental legislation.
- The environmental management plan must include all the aspects and impacts relating to the activity and address the principle of continual improvement.
- The *Contractor* employees shall be inducted on the environmental requirements as per these documents.
- The *Contractor* shall comply with all Eskom Medupi Power Station environmental requirements such as policies, standards, and procedures.
- Non-conformance and incident reporting and investigations shall be done by the *Contractor*, such reports must include but not limited to the following information:
  - ✓ The cause of the non-conformance/incident
  - ✓ The proposed actions to correct and prevent recurrence.
- Eskom Medupi Power Station shall issue non-conformances where there are deviations from Eskom Medupi Power Station Procedures and any other environmental requirements.
- The *Contractor* shall allocate funds for the implementation of environmental requirements.
- The *Contractor* shall provide waste receptacles for their Laydown area and ensure that once the waste receptacles are full are taken to the designated waste area

3.3 Quality assurance requirements

3.3.2 Contract execution

The *Contractor* shall submit the following documents within 30 days or as per stated timeline after the contract date, prior to the commencement of work, for acceptance by Eskom:

- The *Contractor* shall complete a QCP before contract award. This shall be reviewed and signed off by Eskom within 30 days or as per stated timeline after contract award.
- The *Contractor* shall complete a quality control plan and ITP(s) for review and acceptance by Eskom prior to the commencement of any work, inclusive of subcontracted work, within 30 days or as per stated timeline after contract award.

- The subcontractor QCP/ ITP shall be submitted for review and comment by the *Contractor* supplier and by Eskom within 30 days or as per stated timeline after the award of the tender. All *Contractor* and Eskom comments shall be resolved prior to commencing work.
- The equipment lists and an indication of pressurised components and systems.

Note: These plans are to be compiled in line with Eskom's requirements and will have to be discussed with, and approved by, Eskom prior to any work commencing.

- Correspondence shall be directed to the *Service Manager*, and periodic quality review meetings shall be convened by Eskom with the *Contractor*.
- The mandatory quality review meetings are to be convened by the nominated project quality manager or his/her representative for the contract.
- Monthly quality performance and management reports are to be prepared by the supplier during contract execution. The content of these reports shall be agreed by Eskom when submitted to Eskom on a monthly basis.

3.3.3 *Contractor* Quality Performance Monitoring Phase

During the contract execution phase, suppliers shall be monitored by Eskom for performance on quality-related aspects.
The outcomes of such monitoring will enable Eskom to take any appropriate actions pertaining to the *Contractor*.
The monitoring shall be carried out periodically by Eskom or at predetermined intervals during the execution of a contract using agreed key performance indicators. The monitored key performance areas include the following:

- CQP and QCP /ITP
- Delivery
- Design
- Cost
- Management system

Subsequent key performance indicators associated with these areas will include the following:

- Nonconformity monitoring
- Audit and assessment evaluation scoring
- Management system compliance and accreditation
- Achievement of delivery targets as per contractual agreements
- Process improvements
- Correction and corrective action response and closure

3.3.4 *Contractor* Quality Audit

1. Quality audits and related quality performance reviews are intended to provide an objective evaluation of compliance with performance expectations defined in this specification, in the *Contractor* contract quality plan (CQP), and in any other project Service Information specification.
2. Quality audits and related quality performance reviews include, but are not limited to, any quality or other project functional area audits, assessments, verification of compliance reviews, surveillance, inspections, or other interim or final assessments of scope of work deliverables provided by the *Contractor* or Subcontractor.
3. Quality audits and related quality performance reviews shall be carried out by trained, accredited, and experienced personnel in accordance with procedures documented in the CQP.
4. The *Contractor* shall submit, for Eskom review, documented processes for conducting project scope of work quality audits and related quality performance reviews. *Contractor* quality audits and related quality performance review processes shall be designed to address evaluation of progress towards completion of project functional area deliverables as well as final deliverable quality.

The *Contractor* shall provide a schedule of anticipated quality audits covering all functional areas and related quality performance reviews at the time of first post-contract award CQP submission

4 Procurement

4.1 People

4.1.1 Minimum requirements of people employed

The Contractor to submit organogram to the *Service Manager* of personnel applicable to this contract.

4.1.2 BBBEE and preferencing scheme

The company shall maintain or improve upon their current B-BBEE Contribution level for the duration of the contract. The *Contractor* will be required to submit a new B-BBEE certificate within 3 months, should ownership of the company change during the life of the contract.

4.1.3 Supplier Development and Localisation

The *Contractor* complies with and fulfils the *Contractor*'s obligations in respect of the SDL&I in accordance with and as provided for in the *Contractor*'s SD&L Compliance Schedule

Skills Development:

Eskom intends to improve skill development by ensuring that technical support is directed towards enhancing supply capacity within the industry or sector of operation. By doing this the capacity and competitiveness of the local supply base will be increased and the goals of shared growth, employment creation, poverty reduction and skill development will be achieved.

Tenders are encouraged to propose Skill Development initiated in terms of the Skill required for this project

Skill types	Eskom Target	Entry level	Output	Tenderers proposal

The *Contractor* shall keep accurate records and provide the Service Manager with reports on the *Contractor*'s actual delivery against the above stated SD&L criteria. Reports to be provided on a monthly contractual meeting.

SDL&I Penalty and Performance Security:

Eskom will apply a penalty of 2.5% of the Contract Value for failure to meet SDL&I obligations.
For the duration of the contract, Eskom will retain 2.5% of every invoice (excluding VAT) as security for the fulfilment of all SDL&I Obligations. The retained amounts shall only be released to the Contractor upon:
• Eskom receives the SDL&I progress report/s from the contractor.
• Fulfilment of all SDL&I obligations by the contractor.
• Submission of an approved compliance report by SDL&I Department.

4.2 Subcontracting

4.2.1 Preferred subcontractors

Eskom will do business with the suppliers that are prepared to sub-contract 30% of the contract value to EME or QSE's that are at least 51% Black Owned from rural/underdeveloped/township.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

a) The *Contractor* submits the proposed contract data for each subcontracting for acceptance to the *Project Manager*.
b) The *Contractor* prepares s subcontracting document as according to the NEC Contract.

c) The *Contractor* must inform the *Project Manager* when intending to subcontract some of the works from the contract scope.
d) The *Contractor* takes note that their Subcontractors Safety Files will be accepted by the *Contractor* Safety Manager before it will be handed to the SHE practitioner/Officers for verification of compliance before any work commence. Proof of acceptance by the Contractor Safety Manager needs to be in the Safety file when handed over to SHE Practitioners for verification.
e) The *Contractor* only employs qualified sub-contractors

4.2.3 Limitations on subcontracting

The *Contractor* is encouraged to procure/spend on the designated groups from rural/underdeveloped/township area a minimum of 15% of the contract value.

4.3 Plant and Materials

4.3.1 Specifications

Plant and materials provided by the *Contractor* and the preventative maintenance thereof will be the responsibility of the *Contractor*.

4.3.2 Correction of defects

This will be governed by as per core clause 4, testing and defects.

4.3.3 *Contractor*'s procurement of Plant and Materials

The *Contractor* must inform the *Employer* immediately of any constraints experienced during the procurement process of plant and materials whenever required to procure any materials.

4.3.4 Tests and inspections before delivery

- It is the *Contractor*'s responsibility to ensure the machinery and equipment intended for use on this contract are inspected, tested and certified.
- The *Contractor* and the *Employer* must maintain communication regarding the test and inspections that must be done and give feedback on the result obtained. The *Contractor* must inform the *Employer* in time for a test or inspection to be arranged and done before doing the work that will obstruct the test or inspection.

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

Both parties shall agree if there is any Plant and Material that the *Contractor* require to execute work. The *Employer* will provide a list of Plant and Materials to be provided before commencement of the task.

4.3.6 Cataloguing requirements by the *Contractor*

The *Contractor* will fill in the appropriate Data Capturing form (DCF) to capture the information for the changes or new spares. Updates on the cataloguing and SAP systems will be done by the *Employer.* Spares that are not catalogued can only be delivered with an approved 'Data Capture Form' (DCF) for that specific spare or assembly. The *Contractor* will therefore be required to submit the completed DCF to the *Employer*'s for approval before delivery.

5 Working on the Affected Property

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

Medupi Power Station is declared a Nation Key Point (NKP), all regulations, Laws and procedures related to NKP must be strictly adhered to.
The Entry to site is only approved once the following is adhered to:

1. The *Contractor*'s Safety file is to be approved by the *Employer*'s Safety department.
2. Site-specific induction is to be done by all personnel.
3. All contract employees must have access permits to the site
4. Acceptance of this tender is subject to the condition that both the contracting company's management and its employees will provide Eskom with a clear criminal record not older than thirty (30) days from a reputable screening company. If the principal *Contractor* appoints a subcontractor, the same provisions and measures will apply to the subcontractor. Acceptance of the tender is also subject to the condition that the *Contractor* will implement all such security measures for the safe performance of the work as required in the scope of the contract. Should the awarded *Contractor* fail to comply with the criminal record check process requirements and/or critical staff identified as part of the contract, failing the screening requirements, the *Employer* may terminate the contract

5.2 People restrictions, hours of work, conduct and records

5.2.1 People restrictions

*Contracto*r's employees are restricted to the Affected Property only

5.2.2 Hours of work

- The *Contractor* will align his operating shifts to that of the *Employer*'s shift cycle.
  1. Normal working hours is Eskom working hours:
     a. Monday to Thursday **07:00 - 16:15(Lunch 12:00-12:30)**
     b. Fridays **07:00 - 12:00 (No lunch break)**

5.2.3 Conduct

a) The *Contractor* and his employees are always required to maintain professional and ethical conduct, that upholds the Eskom values to the highest standard
b) Should the *Contractor*'s employees be found to contravene the Eskom values, lifesaving rules, and/or any of the regulations, the *Contractor* must institute disciplinary action, which may include removal from site, until the disciplinary process is concluded.

5.2.4 Records

The *Contractor* is expected to keep appropriate and sufficient records of the employees, including:
a) *Contractor*'s performance
b) Safety and environmental statistics, and
c) Any other required records as communicated by the *Employer*

5.3 Health and safety facilities on the Affected Property

There is a medical station on site, fire and rescue service for assistance with serious incidents and treatment of all serious injuries during normal working hours. Emergency services are available during normal working hours by dialling this phone number 078 100 5614/ 014 762 2555 and also available after hours or else contacting the Electrical Operating Desk (EOD) at 014 762 6490/1 However, the *Contractor* is expected to handle all minor incidents in-house by providing a first aider and a first aid kit.
The *Contractor* must familiarise themselves with the emergency procedure which will be provided by the *Employer*. The *Service Manager* will inform the *Contractor* of the emergency preparedness (EP) procedure, and the *Contractor* must ensure that EP procedure is shared with the employees.
All other requirements and/or facilities will be communicated by the *Employer* to the *Contractor*.

5.4 Environmental controls, fauna & flora

Medupi Power Station is maintaining a *Monitoring, Control and Eradication for Alien and Invasive Species Plan*. The *Contractor* shall support Medupi Power Station's initiative where necessary, in ensuring that alien and invasive plant species are maintained as per programme and within the legal requirements pertaining to such plant species. The relevant plan will be shared upon request with the *Contractor*.

5.5 Cooperating with and obtaining acceptance of Others

Proper co-ordination and work planning must be done when working in any area where others are performing work or activities. Should the *Contractor* request any interfaces with Others, it will be coordinated by the *Employer.*

5.6 Records of *Contractor*'s Equipment

a) The *Contractor* to declare all equipment and tools via a pre-set-up list at the main entrance, where removal permit will be issued by Security personnel.
b) *Contractor* needs to have a list of inventories of their equipment on site.
c) Proof of site entrance needs to be provided before equipment can be removed from site

5.7 Equipment provided by the *Employer*

Equipment provided by the *Employer* is to be signed out on the tools register and returned in a serviceable condition. The *Contractor* will be responsible for replacement of the *Employer* equipment in case is lost or damaged.

5.8 Site services and facilities

5.8.1 Provided by the *Employer*

Sanitary services, water, compressed air, workshop facilities and electricity shall be provided by Eskom at fixed points on the plant. There is also a tuck-shop on site, only operate on weekdays and are for the *Contractor*'s own cost.

5.8.2 Provided by the *Contractor*

The *Contractor* is to supply all the personal protective equipment, transport, accommodation, tools, equipment, cell phones, stationery, and consumables to perform all the required tasks on site. And any other as per agreed *Price List*.

5.9 Control of noise, dust, water and waste

The *Contractor* will always be required to use appropriate PPE to mitigate and minimise exposure to noise and dust. Ear protection shall be worn whenever *Contractor* enters a plant with a noise level of 85 decibels(db) and above or working with machines that produce noise level of 85 db. The *Contractor* must always wear dust musk whenever they work in the dust environment. The *Contractor* must treat water as scarce resource and recycle where possible. The *Employer* advocates the appropriate disposal of waste to enhance recycling.

5.10 Hook ups to existing works

Hooking up on heights is a non-negotiable lifesaving rule of Eskom, Medupi Power Station applies Zero Tolerance to non-compliance of the rule or any other lifesaving rule. The same disciplinary process and procedure will be followed when any of the lifesaving rules have been breached.

5.11 Tests and inspections

5.11.1 Description of tests and inspections

Any tests and inspections will be determined by the *Contractor* and communicated to the *Employer* for approval.

5.11.2 Materials facilities and samples for tests and inspections

The materials facilities and samples for test and inspection to be carried out by the *Contractor*. The Materials facilities and samples for tests and inspections will be determined by the *Contractor* and communicated to the *Employer* for approval.

6 List of drawings

6.1 Drawings issued by the *Employer*

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

Drawing number	Revision	Title
N/A		