NEC3 Supply Contract (SC3)

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

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

for **Supply and delivery of Pumps, Compressors, Gearboxes and Blowers Spares to Medupi Power Station on as and when required basis for 60 months**

Contents:		**No of pages**
Part C1	**Agreements & Contract Data**	**[●]**
Part C2	**Pricing Data**	**[●]**
Part C3	**Scope of Work**	**[●]**

CONTRACT No. **[Insert at award stage]**

PART C1: AGREEMENTS & CONTRACT DATA

Contents:

C1.1 Form of Offer & Acceptance

Offer

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

Supply and delivery of Pumps, Compressors, Gearboxes and Blowers Spares to Medupi Power Station on as and when required basis for 60 months

The tenderer, identified in the Offer signature block, has

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

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

	The offered total of the Prices exclusive of VAT is	**R [●]**
	Value Added Tax @ 15% is	**R [●]**
	The offered total of the amount due inclusive of VAT is[1]	**R [●]**
	(in words) **[●]**	

This Offer may be accepted by the Purchaser 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 *Supplier* 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 .....

[1] This total is required by the *Purchaser* 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 Purchaser identified below accepts the tenderer's Offer. In consideration thereof, the Purchaser shall pay the Supplier 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 Purchaser 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: Goods Information including Supply Requirements

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 Purchaser 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 Purchaser'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 Purchaser **Eskom Holdings SOC Ltd, Medupi Power Station**
Steenbokpan Road
Lephalale,0555
(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 *Purchaser* 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 Purchaser 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 Purchaser 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 Purchaser 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 Purchaser**
Signature	.....	.....
Name	.....	.....
Capacity	.....	.....
On behalf of	..... *(Insert name and address of organisation)*	**Eskom Holdings SOC Ltd** **Medupi Power Station** **Steenbokpan Road** **Lephalale, 0555**
Name & signature of witness	.....	.....
Date	.....	.....

C1.2 SC3 Contract Data

Part one - Data provided by the *Purchaser*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X3: Multiple currencies
		X7: Delay damages
		X13: Performance bond
		Z: *Additional conditions of contract*
	of the NEC3 Supply Contract (April 2013) [2]	(If the December 2009 edition is to be used delete April 2013 and replace by December 2013)
10.1	The *Purchaser* 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 *Supply Manager* is (name):	**[●]**
	Address	**Medupi Power Station, Steenbokpan Road, Lephalale, 0555**
	Tel	**[●]**
	e-mail	**[●]**
11.2(13)	The *goods* are	**Pumps, Compressors, Gearboxes and Blowers Spares**
11.2(13)	The *services* are	**Supply and delivery of spares**
11.2(14)	The following matters will be included in the Risk Register	**1. Late delivery: delay damages to be implemented** **2. Labour and Community Unrest which prevent the *Supplier* access to deliver: Early warning to be issued by any Parties** **3. Early warning notification to be issued for any risks**
11.2(15)	The Goods Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**

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

11.2(15)	The Supply Requirements as part of the Goods Information is in	**Annexure A to this Contract Data**
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 *Supplier's* main responsibilities**	**As per NEC3 SC Core clause 2**
3	**Time**	
30.1	The *starting date* is.	**TBC**
30.1	The *delivery date* of the *goods* and *service*s is:	***goods and services*** / ***delivery date***
		1 **Supply and delivery of Pumps, Compressors, Gearboxes and Blowers spares** / **As per the purchase order**
30.2	The *Supplier* does not bring the *goods* to the Delivery Place more than one week before the Delivery Date.	**To be agreed by both Parties**
31.1	The *Supplier* is to submit a first programme for acceptance within	**3 days after receipt of the purchase order.**
32.2	The *Supplier* submits revised programmes at intervals no longer than	**2 days**
4	**Testing and defects**	
42	The *defects date* is	**52 weeks after Delivery.**
43.2	The *defect correction period* is	**4 weeks**
42.2	The *defects access period* is	**5 days**
5	**Payment**	
50.1	The *assessment interval* is	**Continuously, once spares passed Quality Check at Medupi Power Station**
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 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 NEC3 SC Core clause 6**
7	**Title**	**As per NEC3 SC Core clause 7**
8	**Risks, liabilities, indemnities and insurance**	
80.1	These are additional *Purchaser's* risks	**Only the risks the risks listed under subclause 80.1 of the NEC3 SC**
88.1	The *Supplier's* liability to the *Purchaser* for indirect or consequential loss, including loss of profit, revenue and goodwill is limited to	**R0.0 (zero Rand)**
88.2	For any one event, the *Supplier's* liability to the *Purchaser* for loss of or damage to the *Purchaser's* property is limited to	**(1) for the *Purchaser's* existing and surrounding property in the care, custody and control of the *Supplier* the amount of the deductible (first amount payable) relevant to the event** **and** **(2) for all other existing *Purchaser's* property the applicable deductible as at contract date**
88.3	The *Supplier's* liability for Defects due to his design which are not notified before the last *defects date* is limited to:	**The total price of the design, manufacturing and delivery**
88.4	The *Supplier's* total liability to the *Purchaser*, for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	**The total price of the purchase order**
88.5	The *end of liability date* is	**1 years after Delivery of the whole of the *goods* and *service*s.**
9	**Termination and dispute resolution**	
94.1	The *Adjudicator* is	**the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).**
	Address	**1st Floor, Maisels Chamber, 4 Protea Place, Sandton**
	Tel No.	**011 320 0600**
	Fax No.	**011 320 0533**
	e-mail	**info@arbitration.co.za**

94.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA, a Division of the South African Institution of Civil Engineering, or its successor body (See www.ice-sa.org.za)**
94.4(2)	The *tribunal* is:	**arbitration**
94.4(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.**
94.4(5)	The place where arbitration is to be held is	**South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - 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.**

10 Data for Option clauses

X1 Price adjustment for inflation

X1.1 The *base date* for indices is: **Base date will be the month before the month which the enquiry closes. CPA will kick in after sixteen (16) months from the base date. The sixteen months comprises of one (1) month prior to enquiry closing, three (3) months normal tender validity period as prescribed by the CIDB Act, and the twelve (12) months being the first twelve (12) months of the contract period.**

The proportions used to calculate the Price Adjustment Factor are:

Proportion	Linked to index for	Index prepared by
0.70	**Mechanical Engineering**	**SEIFSA Table G1**
0.15	**Transport**	**SEIFSA Table L2B**
0.15	**non-adjustable**	
1.00		

X2 Changes in the law

X2.1 A change in the law of: **Republic of South Africa is a compensation event if it occurs after the Contract Date**

X3 Multiple currencies

X3.1 The *Purchaser* will pay for these items in the currencies stated

Items	Other currency	Total maximum payment in the currency
[●]		
[●]		
[●]		

X3.1	The *exchange rates* are those published in	**[●] on [●] (date)** **The items will be paid in the other currency** **- to a foreign Bank account nominated by the *Supplier*** **- to a valid SARB approved CFC account in South Africa** **- in accordance with an alternative payment method agreed with the *Purchaser* 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)**	
X7	**Delay damages**		
X7.1	Delay damages for Delivery are	**Delivery of**	**amount per day**
		Spares	**R 1 000.00, per day from the Delivery Date for each day until the earlier of delivery**
X13	**Performance bond**	**This clause is depended on the results of the financial evaluations**	
X13.1	The amount of the performance bond is	**R [●]**	
Z	**The *additional conditions of contract* are**	**Z1 to Z15 always apply for Eskom**	

Z1 Cession delegation and assignment

Z1.1 The *Supplier* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Purchaser.*

Z1.2 Notwithstanding the above, the *Purchaser* may on written notice to the *Supplier* 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 *Supplier* 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 *Purchaser* for the performance of this contract.

Z2.2 Unless already notified to the *Purchaser*, the persons or organisations notify the *Supply Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Supplier* on their behalf.

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

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

Z3.1 Where a change in the *Supplier's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Supplier*'s B-BBEE status, the *Supplier* notifies the *Purchaser* within seven days of the change.

Z3.2 The *Supplier* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Supply Manager* within thirty days of the notification or as otherwise instructed by the *Supply Manager*.

Z3.3 Where, as a result, the *Supplier's* B-BBEE status has decreased since the Contract Date the *Purchaser* may either re-negotiate this contract or alternatively, terminate the *Supplier*'s obligation to Provide the Goods and Services.

Z3.4 Failure by the *Supplier* to notify the *Purchaser* of a change in its B-BBEE status may constitute a reason for termination. If the *Purchaser* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Confidentiality

Z4.1 The *Supplier* 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 *Supplier*, enters the public domain or to information which was already in the possession of the *Supplier* at the time of disclosure (evidenced by written records in existence at that time). Should the *Supplier* disclose information to Others in terms of clause 23.1, the *Supplier* ensures that the provisions of this clause are complied with by the recipient.

Z4.2 If the *Supplier* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Supply Manager*.

Z4.3 In the event that the *Supplier* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Supplier*, to the extent permitted by law prior to disclosure, notifies the *Purchaser* 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 *Supplier* 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 *goods* or any portion thereof, in the course of Providing the Goods and Services and after Delivery, requires the prior written consent of the *Supply Manager*. All rights in and to all such images vests exclusively in the *Purchaser*.

Z4.5 The *Supplier* 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 *Supply 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 25.4

Z6.1 The *Supplier* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the provision of the *goods* and execution of the *services*.

Without limitation the *Supplier*:

- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with 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 supply and
- undertakes, in and about the execution of the supply, to comply 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 *Supplier's* direction and control, likewise observe and comply with the foregoing.

Z6.2 The *Supplier*, in and about the execution of the supply, 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 *Supplier'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 *Supply Manager* in terms of core clause 51.1, the *Supplier* provides the *Purchaser* with a tax invoice in accordance with the *Purchaser*'s procedures stated in the Goods Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Supplier* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Purchaser* 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 *Purchaser* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3 The *Supplier* (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 *Purchaser*'s VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

Z8.1 Delete from the last sentence in core clause 61.3 the words, "unless the event arises from the *Supply Manager* giving an instruction, changing an earlier decision or correcting an assumption".

Z9 *Purchaser's* limitation of liability

Z9.1 The *Purchaser's* liability to the *Supplier* for the *Supplier's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9.2 The *Supplier*'s entitlement under the indemnity in 83.1 is provided for in 60.1(12) and the *Purchaser*'s liability under the indemnity is limited.

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

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

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

Z11.1 If the amount due for the *Supplier*'s payment of delay damages reaches the limits stated in this Contract Data for Option X7, the *Purchaser* may terminate the *Supplier*'s obligation to Provide the Goods and Services using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

Z12 Ethics

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

Affected Party means, as the context requires, any party, irrespective of whether it is the *Supplier* 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 *Supplier*, 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.

Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z12.2 The *Purchaser* may terminate the *Supplier*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Supplier* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Purchaser* 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 *Purchaser* can terminate the *Supplier*'s obligation to Provide the Services for this reason.

Z12.3 If the *Purchaser* terminates the *Supplier*'s obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Purchaser* does not have a contractual bond with the Committing Party, the *Supplier* ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z__13.1 Replace core clause 84 with the following:

Insurance cover **84**

84.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

84.2 The *Supplier* provides the insurances stated in the Insurance Table A for events which are at the *Supplier*'s risk from the *starting date* until the last *defects date* or a termination certificate has been issued.

INSURANCE TABLE A

Insurance against	**Minimum amount of cover or minimum limit of indemnity**
Loss of or damage to the *goods*, plant and materials	The replacement cost where not covered by the *Purchaser*'s insurance. The *Purchaser*'s policy deductible as at Contract Date, where covered by the *Purchaser*'s insurance.
Liability for loss of or damage to property (except the *goods*, plant and materials and equipment) and liability for bodily injury to or death of a person (not an employee of the *Supplier*) caused by activity in connection with this contract	**Loss of or damage to property** *Purchaser*'s property The replacement cost where not covered by the *Purchaser*'s insurance. The *Purchaser*'s policy deductible as at Contract Date, where covered by the *Purchaser*'s insurance. Other property The replacement cost **Death of or bodily injury** The amount required by the applicable law.
Liability for death of or bodily injury to employees of the *Supplier* arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law

Z_13.2 Replace core clause 87 with the following:

Insurance by the *Purchaser*

87

87.1 The *Purchaser* provides the insurances stated in the Insurance Table B

INSURANCE TABLE B

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

Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

Z14.1 The *Purchaser* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z14.2 The *Purchaser* is solely responsible for and indemnifies the *Supplier* or any other person against any and all liabilities which the *Supplier* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Supplier* or any other person or the presence of the *Supplier* or that person or any property of the *Supplier* or such person at or in the KNPS or on the KNPS site, without the permission of the *Purchaser* or of a person acting on behalf of the *Purchaser*.

Z14.3 Subject to clause Z14.4 below, the *Purchaser* 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 *Supplier* or any other person, or the presence of the *Supplier* or that person or any property of the *Supplier* or such person at or in the KNPS or on the KNPS site, without the permission of the *Purchaser* or of a person acting on behalf of the *Purchaser*.

Z14.4 The *Purchaser* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

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

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

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

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

Safe Levels means airborne asbestos exposure levels conforming to the Standard's

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

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

SANAS means the South African National Accreditation System.

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

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

Z15.2 Upon written request by the *Supplier*, the *Purchaser* 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 *Supplier* may perform Parallel Measurements and related control measures at the *Supplier*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

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

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

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

Z15.6 The *Supplier* 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.

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

Annexure A: Supply Requirements

The Supply Requirements for this contract are as follows:

1. The requirements for the supply are	The *Supplier* manufactures, prototypes, tests and stores the *goods* including order and timing	
2. The requirements for transport are	The *Supplier* transports the *goods* and the mode of transport to Medupi Power Station	
3. The delivery place is	Medupi Power Station main stores	
4. Actions of the Parties during supply	**Action**	**Party which does it**
	Giving notice of Delivery	*Supplier*
	Checking packing and marking before dispatch	*Supplier*
	Contracting for transport	*Supplier*
	Pay costs of transport	*Supplier*
	Arrange access to delivery place	*Supplier*
	Loading the *goods*	*Supplier*
	Unloading the *goods*	*Supplier and Purchaser*
For international procurement	Undertake export requirements	
	Undertake import requirements	
5. Information to be provided by the *Supplier*	**Title of document**	
	Packing lists for cases and their contents	
	Copy of invoice for the *goods*	
	Delivery Note	
	Test results and maintenance manuals	
For international procurement	Licences, authorisations and other formalities associated with export of the *goods*	
	Air Waybill or Bill of Lading with associated landing, delivery and forwarding order	
	The Bill of Entry endorsed by the importation authority	
	Customs work sheets, showing tax, duties and surcharges which the law of the country into which the *goods* are being imported requires the importer to pay	
	Invoice from the importation clearing agent showing airline fees, landing charges, wharfage and dock dues as applicable	
	Specify other import documents required by authorised officials.	

All other information NOT pertinent to the above is given in the balance of the Goods Information

C1.2 Contract Data

Part two - Data provided by the *Supplier*

Clause	Statement	Data
10.1	The *Supplier* is (Name): Address Tel No. Fax No.	
11.2(8)	The Goods Information for the *Supplier's* design is in:	
11.2(11)	The tendered total of the Prices is	**R , (in words) Rate based**
11.2(12)	The *price schedule* is in: SA Rands, unless otherwise specified.	
11.2(14)	The following matters will be included in the Risk Register	
25.2	The restrictions to access for the *Supply Manager* and Others to work being done for this contract are	
30.1	The *delivery date* of the *goods* and *service*s is:	***goods and services*** / ***delivery date*** **1** **[●]** **[●]** **2** **[●]** **[●]** **3** **[●]** **[●]**
31.1	The programme identified in the Contract Data is contained in:	
63.2	The *percentage for overheads and profit* added to the Defined Cost is	**%**

C1.3 Forms of Securities

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 Bond / Guarantee)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg

Bank reference No.

Date:

Dear Sirs,

Performance Bond – Demand Guarantee for [insert name of *Supplier*] required in terms of contract [insert *Supplier*'s contract reference number or title]

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

1.1	"Bank" means	[Insert name of Bank], [●] Branch, Registration No. [●]
1.2	"Bank's Address" means	[Insert physical address of Bank]
1.3	"Contract" means	the written agreement relating to providing the *goods* and *service*s, entered into between the *Purchaser* and the *Supplier*, on or about the [●] day of [●] 200[●] (Contract Reference No. [●]) as amended, varied, restated, novated or substituted from time to time;
1.4	"*Supplier*" means	[●] a company registered in accordance with the laws of [●] under Registration No [●].
1.5	"*Purchaser*" means	Eskom Holdings SOC Ltd a company registered in accordance with the laws of the Republic of South Africa under Registration Number [●]
1.6	"Expiry Date" means	the earlier of • the date that the Bank receives a notice from the *Purchaser* stating that all amounts due from the *Supplier* as certified in terms of the contract have been received by the *Purchaser* and that the *Supplier* 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 the *Purchaser*.
1.7	"Guaranteed Sum" means	the sum of R[●], ([●] Rand)
1.8	"*goods* and *service*s" means	[insert details from Contract Data part 1]

2. At the instance of the *Supplier*, 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 the *Purchaser* as security for the proper performance by the *Supplier* of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to the *Purchaser*, on written demand from the *Purchaser* 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:

   - be signed on behalf of the *Purchaser* by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate;
   - state the amount claimed ("the Demand Amount');
   - state that the Demand Amount is payable to the *Purchaser* 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:

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

   - shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and
   - 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 the *Purchaser* and the *Supplier*.

6. The *Purchaser* shall be entitled to arrange its affairs with the *Supplier* 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 *Supplier* or any variation under or to the Contract.

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

8. This Guarantee:

   - shall expire on the Expiry Date until which time it is irrevocable;
   - is, save as provided for in 7 above, personal to the *Purchaser* and is neither negotiable nor transferable;
   - shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;
   - shall be regarded as a liquid document for the purpose of obtaining a court order; and
   - 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.
   - will be invalid and unenforceable if any claim which arises or demand for payment is received after the Expiry Date.

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

Signed at _____ on this _____ day of _____ 20__

For and on behalf of the Bank

Bank Signatories(s)		
Name(s) (printed)		
Witness(s)		

Bank’s seal or stamp		

PART 2: PRICING DATA

NEC3 Supply Contract

Document reference	Title	No of pages
C2.1	Pricing assumptions	2
C2.2	The *price schedule*	**[•]**

C2.1 Pricing assumptions

1. How *goods* and *service*s are priced and assessed for payment

Clause 11 in NEC3 Supply Contract, (SC3) core clauses states:

Identified and defined terms	11 11.2	(11) The Prices are the amounts stated in the price column of the Price Schedule. Where a quantity is stated for an item in the Price Schedule, the Price is calculated by multiplying the quantity by the rate. (12) The Price Schedule is the *price schedule* unless later changed in accordance with this contract.
Assessing the amount due	50.2	The amount due is • the Price for each lump sum item in the Price Schedule which the *Supplier* has completed, • where a quantity is stated for an item in the Price Schedule, an amount calculated by multiplying the quantity which the *Supplier* has completed by the rate, • plus other amounts to be paid to the *Supplier*, • less amounts to be paid by or retained from the *Supplier*. Any tax which the law requires the *Purchaser* to pay to the *Supplier* is included in the amount due.

This confirms that the Supply Contract is a priced contract where the Prices are derived from a list of items of *goods* and *service*s which can be priced as lump sums or as expected quantities of *goods* and *service*s multiplied by a rate, or a mix of both.

2. Function of the Price Schedule

Clause 53.1 states: “Information in the Price Schedule is not Goods Information”. This confirms that instructions to do work or how it is to be done are not included in the Price Schedule but in the Goods Information. This is further confirmed by Clause 20.1 which states, “The *Supplier* Provides the Goods and Services in accordance with the Goods Information”. Hence the *Supplier* does **not** Provide the Goods and Services in accordance with the Price Schedule. The Price Schedule is only a pricing document.

3. Preparing the *price schedule*

Items in the *price schedule* may have been inserted by the *Purchaser* and the tendering supplier should insert any additional items which he considers necessary. Whichever party provides the items in the *price schedule* the total of the Prices is assumed to be fully inclusive of everything necessary to Provide the Goods and Services as described at the time of entering into this contract.

It will be assumed that the tendering supplier has

- Read Pages 8, 11, 12 and Appendix 5 of the SC3 Guidance Notes before preparing the *price schedule;*
- Included in his Prices and rates for correction of Defects (core clause 43.1) as there is no compensation event for this unless the Defect is due to a *Supplier’s* risk;
- Spread the cost of doing work he chooses not to list as separate items in the *price schedule*

across other Prices and rates in order to fulfil the obligation to Provide the Goods and Services for the tendered total of the Prices;
- Understood that there is no adjustment to lump sum prices in the *price schedule* if the amount, or quantity, of work within that lump sum item later turns out to be different to that which the *Supplier* estimated at time of tender. The only basis for a change to the Prices is as a result of a compensation event per clause 60.1;
- Understood that the *Supplier* does not have to allow in his Prices and rates for matters that may arise as a result of a compensation event.

3.1. Format of the *price schedule*

Entries in the first four columns in the *price schedule* in section C2.2 are made either by the *Purchaser* or the tendering supplier.

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

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

If the *Supplier* is to be paid an amount for an item proportional to the length of time for which the *goods* and *service*s are provided, a unit of time is stated in the Unit column and the length of time (as a quantity of the stated units of time) is stated in the Quantity column.

C2.2 the *price schedule*

ITEM No.	DESCRIPTION	UNIT	QUANTITIES ESTIMATED FOR 5 YEARS	RATE
PUMPS				
	WTP			
1	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.	EA	3	
2	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.	EA	2	
3	DIAPHRAGM PUMP, DMH 170-50 B-SS/E/SS-X-O1A1A1	EA	6	
4	DIAPHRAGM PUMP, DMH 24-10 B-PP/E/T-X-O1B3B3	EA	3	
5	DIAPHRAGM PUMP, DMH 67-10 B-PP/E/T-X-O1B4B4	EA	3	

6	DIAPHRAGM PUMP, DDA 7.5-16FCM-PV/T/C-F-31U2U2FG	EA	3	
7	DIAPHRAGM PUMP, DMH 1150-10/2 B-PP/E/G-X-O1B5B5	EA	3	
8	DIAPHRAGM PUMP, DMH 550-10 B-PP/E/T-X-X7B4B5	EA	3	
9	DIAPHRAGM PUMP, DMH 46-10 B-PVC/E/T-X-O1B1B1	EA	3	
10	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.	EA	2	
11	DIAPHRAGM PUMP, 95715837/DMH 67-10 B-PV/T/T- X-O1B4B4	EA	3	
12	DIAPHRAGM PUMP, DMH 550-10 B-PV/T/T-X-X7B4B5	EA	3	
13	DIAPHRAGM PUMP, DMH 1500-4/2 B-PV/T/T-X-O1B5B5	EA	3	
14	DIAPHRAGM PUMP, DMH, P/N 253-67-10173, HEAD PRESSURE 1000 KPa, HEAD TEMP 60°C, STROKE FREQUENCY 96/SEC, STROKE 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	EA	3	
15	DIAPHRAGM PUMP, DDA 7.5-16FCM-PV/T/C-F-31U2U2FG	EA	3	
16	DIAPHRAGM PUMP, 95723386/DMH 100-10 B-PVC/V/G-X-O1B2B2	EA	3	
17	DIAPHRAGM PUMP, 95723386/DMH 100-10 B-PVC/V/G- X-O1B2B2	EA	3	
18	DIAPHRAGM PUMP, DMH 5,0-10 B-SS/T/SS-X-O1AA	EA	3	
19	DIAPHRAGM PUMP, DMH 13-10 B-PVC/V/G-X-O1B1B1	EA	3	
20	DIAPHRAGM PUMP, DMH 1500-4/2 B-PVC/V/G-X-O1B8B8	EA	3	

21	DIAPHRAGM PUMP, DMH 100-10 B-PP/V/G-X-O1B4B4	EA	3	
22	DIAPHRAGM PUMP, DMH 100-10 B-SS/E/SS-X-O1A1A1	EA	3	
23	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	EA	3	
24	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.	EA	3	
25	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	EA	4	

	ALIGNING ROLLER BEARINGS 1.301 DIN 635			
26	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 % 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.	EA	6	
27	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.	EA	3	

28	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	EA	5	
	Mobile Plant			
29	DIAPHRAGM PUMP, MEMDOS LB 35, P/N 10407417, CAPACITY 0 – 10 L/Hr, PRESSURE 200 KPa, MOTOR 0.05 KW, PTFE DIAPHRAGM.	EA	3	
30	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.	EA	3	
31	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.	EA	3	
32	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	EA	3	
	CPP			
33	CHEMICAL INJECTION PUMPS, Piston Operated Diaphragm with inbuilt VFD, MODEL No: PKG144M100H3/9.C5.HS.HH3.	EA	3	
34	CHEMICAL INJECTION PUMPS, Piston Operated Diaphragm with inbuilt VFD, MODEL No: PL96P115H3/9.C5.HH3	EA	2	
35	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	EA	2	
36	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.	EA	6	
	STP			
37	DIAPHRAGM PUMP, MODEL DMX 35 – 10, DUTY 0 – 150 L/Hr, MOTOR 0.05 KW, VOLTAGE 400 V 50 HZ	EA	3	
38	FLYGT SUBMERSIBLE CENTRIFUGAL PUMP, MODEL No: CP3045.181 HT252 – 1.2 KW, 80U2-1.5, 30 m^3/h	EA	2	
39	CENTRIFUGAL PUMP, MOTOR 0.75 KW VOLTAGE 415V/3/PHASE, COMPLETE WITH PVC PIPNG & SUCTION/DELIVERY VALVES, Y STRAINER	EA	2	
40	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;	EA	6	

	SEMI- OPEN; CHANNEL IMPELLER; WET; INSTALLATION ON STAIONARY DISCHARGE FLANGE VIA TWINGUIDE RAILS;			
	Aux Cooling			
41	DIAPHRAGM PUMP, DMH 13-10 B-PV/T/T-X-O1B3B3	EA	6	
42	DIAPHRAGM PUMP, DMH 13-10 B-PV/T/T-X-O1B3B3	EA	8	
43	DIAPHRAGM PUMP, DMH 100-10 B-PP/V/G-X-01B4B4; TYPE DMH-253; 100 L/H; 10 BAR; 50 HZ.	EA	4	
	Compressor			
44	ROOT TYPE AIR BLOWER, MODEL No: ROBUSCHI ES35/1C, S/N 10 00892/3/4, MOTOR 19KW (2 POLE)	EA	2	
45	COMPRESSOR; COPELAND SCROLL WITH CORESENSE TECHNOLOGY; MODEL ZP182KCE- TED-455; SERIAL 18DC7257D; R-410A USE ONLY.	EA	6	
46	SCREW AIR COMPRESSOR, MODEL No: RS30 – 371/ RS301 – A10, S/N UCV1019814, 30 KW, 400V, MAWP: 10 BAR.	EA	1	
47	SCREW AIR COMPRESSOR, MODEL No: R4 – 111/ R111 – A8.5, S/N UCV1019989, 11 KW, 400V, MAWP: 11 BAR.	EA	1	
48	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	EA	2	
49	AIR BLOWER, MODEL URAI 33 C/W SOUND ENCLOSURE, VOLTAGE 7.5 KW 400V 2 POLE, 258 NM^3/HOUR @ 65 KPa	EA	2	
50	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	EA	3	
	Gearboxes			
51	GEARBOX, Model DF128-Z38-K4-(71), ASORBED POWER 0.25 KW, SERVICE FACTOR 3.1 TORQUE, OUTPUT POWER 0.55 RMP, OUTPUT TORQUE $t_2$normal 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	EA	3	

52	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.	EA	2	
53	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.	EA	6	
54	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.	EA	3	
55	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.	EA	3	
56	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.	EA	3	
57	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.	EA	3	

58	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	EA	3	
59	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	EA	3	
60	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	EA	2	
61	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	EA	3	
62	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	EA	3	
63	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	EA	3	
64	GEARBOX, Model BREVINI ET3020/MR1/52/00, RATIO 52 TO 1	EA	3	
65	GEARBOX, Model NORD SK01FAL-80L/4 TF, RATIO 5.62, SPEED 245 RPM	EA	3	
66	GEARBOX, Model NORD SK25F AL-100LA/4 TF, RATIO 6.29, SPEED 225 RPM	EA	3	

67	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	EA	3	

Note: The contract is for 5 years (60 months) and the quantities are provisional thereof.

PART 3: SCOPE OF WORK

Document reference	Title	No of pages
	This cover page	1
C3.1	*Purchaser*'s Goods Information	
C3.2	*Supplier*'s Goods Information	
	Total number of pages	

C3.1: *PURCHASER'S* GOODS INFORMATION

Contents

1 Overview and purpose of the *goods* and *service*s

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.

2 Specification and description of the *goods*

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

- All spares as per the table below 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.

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 *Supplier* 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.
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 *Supplier* 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 *Supplier*'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 *Supplier* 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.

2.2 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. The *Supplier* 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.

2.3 Alternatives

1. No technical deviations or alternatives to the technical specifications shall be permitted.
2. In the case of obsolescence, the *Supplier* shall follow process as stated above.
3. In instances where 2.2 does not apply the *Supplier* 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.

2.4 Fabrication

1. All components that are to be fabricated shall be in accordance with the specifications provided.
2. The *Supplier* shall come to site to do measurements of the items that require fabrication.
3. The *Supplier* shall provide drawings that will be approved by the *Employer* prior to the fabrication of any components.
4. The *Supplier* shall provide all testing certificates as required.
5. Any technical deviations shall be addressed as per 2.1 & 2.3 above.

2.5 Miscellaneous spares

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.

2.6 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 *Supplier* for agreement during negotiations. If witnessing of installation is required, this will be at the *Supplier*'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 *Supplier*.

3. Supply Requirements

The Supply Requirements for this contract are in an Annexure A to the Contract Data provided by the *Purchaser*.

4. Specification of the *service*s to be provided

The *Supplier* shall deliver and offload *goods* at the Medupi power station stores. All items shall be delivered with maintenance and operating manuals.

5. Constraints on how the *Supplier* Provides the Goods

5.1 Programming constraints

The *Supplier* to provide delivery plan (as per clause 31.2) of the *goods* after receiving the purchase order.

5.2 Work to be done by the Delivery Date

No incorrect, damaged or faulty *goods* will be accepted. All spares will be inspected before and after offloading. Where testing is required, the test will be done during delivery. All required manuals and test certificates must be available during delivery.

5.3 Constraints at the delivery place and place of use

The *Supplier* shall adhere to Eskom speed limit of 40 km/h while driving on site. The preferred delivery times are Monday to Thursday between 07:00-16:00 and Friday between 07:00-12:00. However, for urgent delivery, the *Supplier* will communicate with the *Supply Manager* to agree on the time and date of delivery.

The Supplier shall adhere to Eskom life saving rule which state that:
1. Open, isolate, test, earth, bond, and/or insulate before touch
2. Hook up at heights
3. Buckle up
4. Be sober
5. Permit to work

The *Supplier* shall adhere to security requirements for access at the Power Station:
1. All vehicles entering and leaving site must be searched. The driver and all passengers must step out of the vehicle and allow security to search. The driver must open his or her vehicle.
2. Dangerous weapons firearm, knives, bombs are not allowed on site.
3. Testing of alcohol is compulsory. Testing can be done at any given time and any place.
4. No alcohol and drugs are allowed on site.
5. All items to be declared at security gate and registered on tool list before entering the site.

5.4 Services & other things to be provided by the *Purchaser* or *Supplier*

The *Purchaser* will provide the overhead cranes and forklift during offloading of the goods. The *Purchaser* will also provide the operator for both machines.

5.5 Management meetings

Meetings of a specialist nature may be convened as specified elsewhere in this Goods Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the manufacture of the *goods*. Records of these meetings shall be submitted to the *Supply 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.

5.6 Documentation control

All contractual communications will be in the form of properly compiled letters or forms attached to e mails and not as a message in the e-mail itself. For urgent request, both Parties can use telephone as form of communication, however it should be confirmed by a letter.

5.7 Health and safety risk management

Supplier OHS requirements

1. The *Supplier* is expected to comply to the following documents when rendering a service to Eskom but not limited to the following:
    a) Eskom contractor Health and Safety requirements standards 32-136
    b) OHS specification/requirements provided
    c) Occupational Health and Safety Act 85 of 1993
    d) Compensation for Occupational Diseases and Illnesses Act 130 of 1993

Note: Please note that after contract award, it is your responsibility to fully align the company's processes to Eskom's OHS requirements (policies, procedures, standards etc).

2. Penalties shall be enforced on the main *Supplier* for non-conformance/s pertaining to Eskom and/or Statutory OHS requirement/s.
3. Ensure that all *Supplier* employees undergo the relevant Eskom induction and the company's
4. Management of *Suppliers*
   The main *Supplier*:
    a) Has to demonstrate to Eskom the process and selection criteria applied when appointing contractors and suppliers
    b) Has to provide notification to Eskom, prior to the appointment of contractors or suppliers for the commencement of work.
    c) Has to ensure that contractors/ suppliers have adequate resources and competencies.
    d) Is accountable for the management of its contractors/ suppliers in order to ensure that the applicable legal and Eskom requirements (that are applicable to the main supplier during contract execution) are complied with by the contractors or suppliers.
    e) The main *Supplier* shall monitor contractors or suppliers through audits and assessments with regard to OHS compliance during the execution of the work.
    f) The grounds for the termination of work done by contractors/suppliers shall be provided by the main supplier
    g) All non-conformances/non-compliance by the contractors/suppliers (all tiers) to the main *Supplier* shall be dealt with directly with the main contractor/supplier in terms of performance and penalty processes.
    h) Eskom reserves the right to verify this when deemed necessary. The contractor may be instructed to provide copies of testimonials/references and the contact detail of clients (including Eskom) for whom the Company has done previous work of a similar nature

5.8 Environmental constraints and management

The *Supplier* shall comply and conform to the following:

1. Environmental Requirements for contractors/suppliers working at Eskom Medupi Power Station
2. Eskom Medupi Power Station Operation Environmental Management Plan
3. Environmental legal and other requirements.
4. Eskom's environmental standards, policies, and procedures where applicable.
5. Pledge to inform all staff of their role in managing environmental impacts on site.
6. Be aware that incidents must be reported within 24 hours of occurrence.
7. Pledge to always implement best practice on site during the contract.
8. Pledge that all non-conformances issued to us will be addressed promptly.
9. Commit to comply to the waste management hierarchy and Medupi waste management practices

5.9 Quality

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

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 supplier.
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

5.10 Invoicing and payment

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

The *Supplier* shall address the tax invoice to *Purchaser* and include on each invoice the following information:

- Name and address of the *Supplier* and the *Supply Manager;*

- The contract number and title;
- *Supplier*'s VAT registration number;
- The *Purchaser*'s VAT registration number.
- Description of *goods* and *service*s provided for each item invoiced based on the Price Schedule;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;
- Service entry and Goods receipt numbers

5.11 Provision of bonds and guarantees

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

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

5.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the *Supplier*

The *Supplier* 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 *Supply Manager* request to do so.

6. Procurement

6.1 Subcontracting

6.1.1 Preferred subcontractors

The *Supplier* may not use a Subcontractor unless a written request is made to the *Employer* and approval

6.1.2 Limitations on subcontracting

6.1.3 Other requirements related to procurement

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

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

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

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

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

6.1.4 Cataloguing requirements by the *Supplier*

The *Supplier* shall be required to DCF spares that do not have material number before delivery

7. List of drawings

7.1 Drawings issued by the *Purchaser*

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

Drawing number	Revision	Title

C3.2 *APPENDIX A : BILL OF MATERIALS*

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 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	GRUNDFOS	3	WAT
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	NETZCH	3	WAT

			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			
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 % 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.	VERDER PUMPS SA	6	WAT
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:	MILTON ROY	2	CCP

			PL96P115H3/9.C5.HH3			
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	MIXTEC	2	WAT

			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.			
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