



NEC3 Engineering and Construction

Short Contract (ECSC3)

A contract between Eskom Holdings SOC Ltd (Reg No. 2002/015527/30)

and

for The provision of FGD ball mill 23 repairs, commissioning
& the supply of spares at Kusile Power Station for 12
months

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C1 Agreements & Contract Data

C1.1 Form of Offer and Acceptance

Offer

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

The provision of FGD ball mill 23 repairs, commissioning & the supply of spares at Kusile Power Station for 12 months

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

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

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

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

Signature(s)

Name(s)

Capacity

**For the
tenderer:**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Tenderer's CIDB registration number:

Acceptance

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

The terms of the Contract, are contained in:

Part 1 Agreements and Contract Data, (which includes this Form of Offer and Acceptance)

Part 2 Pricing Data

Part 3 Scope of Work: Works Information

Part 4 Site Information

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

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be signed by the duly authorised representative(s) for both parties.

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

Notwithstanding anything contained herein, this Agreement comes into effect on the date when the tenderer receives one fully completed and signed copy of this document, including the Schedule of Deviations (if any) together with all the terms of the contract as listed above.

Signature(s)

Name(s)

Capacity

**for the
Employer**

(Insert name and address of organisation)

Name &
signature of
witness

Date

Note: If a tenderer wishes to submit alternative tender offers, further copies of this document may be used for that purpose, duly endorsed, 'Alternative Tender No. _____'

Schedule of Deviations

Note:

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

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

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

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

For the tenderer:

For the Employer

Signature _____

Name _____

Capacity _____

On behalf of _____
(Insert name and address of organisation)

Name & signature of witness _____

Date _____

C1.2 Contract Data

Data provided by the *Employer*

[Instructions to the contract compiler: (delete these two notes in the final draft of a contract)]

1. Please read the relevant clauses in the NEC3 Engineering and Construction Short Contract (April 2013) (ECSC3)¹ before you enter data. The number of the principal clause is shown for most statements however other clauses may also use the same data.
2. Where the following symbol is used “[●]” - data is required to be inserted.]

Completion of the data in full is essential to create a complete contract.

Clause	Statement	Data
General		
10.1	The <i>Employer</i> is (Name):	Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa
	Address	Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg
10.1 & 14.4	The <i>Employer's</i> representative to whom the <i>Employer</i> in terms of clause 14.4 delegates his actions ² is (Name):	Dorothy Mbonane
	Address	Kusile Power Station
	Tel No.	013 699 7339
	Fax No.	[●]
	E-mail address	[●]
11.2(11)	The <i>works</i> are	The Repair and Commissioning of FGD Ball Mill 23 at Kusile Power Station
11.2(13)	The Works Information is in	the document called 'Works Information' in Part 3 of this contract.
11.2(12)	The Site Information is in	the document called 'Site Information' in Part 4 of this contract.
11.2(12)	The <i>site</i> is	Kusile Power Station
30.1	The <i>starting date</i> is.	15 October 2022
11.2(2)	The <i>completion date</i> is.	TBD
13.2	The <i>period for reply</i> is	2 days
40	The <i>defects date</i> is	52 weeks after Completion
41.3	The <i>defect correction period</i> is	2 days
50.1	The <i>assessment day</i> is the	25th of each month.

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za

² Except those actions which can only be done by the *Employer* as a Party to the contract.

50.5	The <i>delay damages</i> are	2% of Total Prices per day
50.6	The retention is	0%
51.2	The interest rate on late payment is	
80.1	The <i>Contractor</i> is not liable to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property in excess of	the amount of the deductibles relevant to the event
	Does the United Kingdom Housing Grants, Construction and Regeneration Act (1996) apply?	No
93.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
93.2(2)	The <i>Adjudicator nominating body</i> is:	the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body
93.4	The <i>tribunal</i> is:	arbitration.
	The <i>arbitration procedure</i> is	the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.
	The place where arbitration is to be held is	South Africa
	The person or organisation who will choose an arbitrator	
	- if the Parties cannot agree a choice or	the Chairman for the time being or his nominee
	- if the arbitration procedure does not state who selects an arbitrator, is	of the Association of Arbitrators (Southern Africa) or its successor body.

The conditions of contract are the NEC3 Engineering and Construction Short Contract (April 2013)³⁴ and the following additional conditions Z1 to Z11 which always apply:

Z1 Cession delegation and assignment

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

³ If June 2005 Edition applies, delete April 2013 and insert June 2005

⁴ State whether attached as a 'PDF' file in terms of Eskom's licence, or to be obtained from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

Z2 Change of Broad Based Black Economic Empowerment (B-BBEE) status

- Z2.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor's* B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.
- Z2.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Employer* within thirty days of the notification or as otherwise instructed by the *Employer*.
- Z2.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the *starting date* the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor's* obligation to Provide the Works.
- Z2.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z3 Confidentiality

- Z3.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to others except where required by this contract. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to others where required by this contract the *Contractor* ensures that the provisions of this clause are complied with by the recipient.
- Z3.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Employer*.
- Z3.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.
- Z3.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Employer*. All rights in and to all such images vests exclusively in the *Employer*.
- Z3.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z4 Waiver and estoppel: Add to clause 12.2:

- Z4.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties or their delegates 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.

Z5 Health, safety and the environment

- Z5.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:
- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
 - warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
 - undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.
- Z5.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z6 Provision of a Tax Invoice and interest. Add to clause 50

- Z6.1 The *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer's* procedures stated in the Works Information, showing the correctly assessed amount due for payment.
- Z6.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of clause 51.2 is then calculated from the delayed date by when payment is to be made.
- Z6.3 The *Contractor* is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer's* VAT number 4740101508 on each invoice he submits for payment.

Z7 Notifying compensation events

- Z7.1 Delete from the last sentence in clause 61.1, "unless the event arises from an instruction of the *Employer*."

Z8 *Employer's* limitation of liability; Add to clause 80.1

- Z8.1 The *Employer* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand).

Z9 Termination: Add to clause 90.2, after the words "or its equivalent":

- Z9.1 or had a business rescue order granted against it.

Z10 Addition to Clause 50.5

- Z10.1 If the amount due for the *Contractor's* payment of *delay damages* reaches the limits stated in this Contract Data (if any), the *Employer* may terminate the *Contractor's* obligation to Provide the Works.

If the *Employer* terminates in terms of this clause, the procedures on termination are those stated in Clause 91.1 and the amount due on termination includes amounts listed in Clause 92.1 less a deduction of the forecast additional cost to the *Employer* of completing the *works*.

Z11 Ethics

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

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

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

Z11.2 The *Employer* may terminate the *Contractor's* obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor's* obligation to Provide the Services for this reason.

Z11.3 If the *Employer* terminates the *Contractor's* obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

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

Z12 Insurance

Z _12.1 Replace core clause 82 with the following:

Insurance cover 82

- 82.1 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.
- 82.2 The *Contractor* provides the insurances stated in the Insurance Table A, from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minimum limit of indemnity	Cover provided until
Loss of or damage to the works	<p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible as at contract date, where covered by the <i>Employer's</i> insurance</p>	The <i>Employer's</i> certificate of Completion has been issued
Loss of or damage to Equipment, Plant and Materials	<p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible as at contract date, where covered by the <i>Employer's</i> insurance</p>	The Defects Certificate has been issued
The <i>Contractor's</i> liability for loss of or damage to property (except the works, Plant and Materials and Equipment) and for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) arising from or in connection with the <i>Contractor's</i> Providing the Works	<p><u>Loss of or damage to property</u></p> <p><u>Employer's property</u></p> <p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible as at contract date where covered by the <i>Employer's</i> insurance</p> <p><u>Other property</u></p> <p>The replacement cost</p> <p><u>Bodily injury to or death of a person</u></p>	

	The amount required by the applicable law	
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable law	

82.3 The *Employer* provides the insurances as stated in the Insurance Table B

INSURANCE TABLE B

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

Z13 Nuclear Liability

Z13.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z13.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 44 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.3 Subject to clause Z13.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z13.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 44 of 1999, or any

replacement section dealing with the same subject matter.

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

Z14 Asbestos

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

AAIA	means approved asbestos inspection authority.
ACM	means asbestos containing materials.
AL	means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.
Ambient Air	means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.
Compliance Monitoring	means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
OEL	means occupational exposure limit.
Parallel Measurements	means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.
Safe Levels	means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.
Standard	means the <i>Employer's Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles</i> .
SANAS	means the South African National Accreditation System.
TWA	means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z14.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z14.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor's* expense. For the purposes of compliance

the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z14.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

- Z14.3 The *Employer* manages asbestos and ACM according to the Standard.
- Z14.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.
- Z14.5 The *Contractor's* personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.
- Z14.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the Asbestos Regulations, 2001.
- Z14.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer's* expense, and conducted in line with South African legislation.

Data provided by the *Contractor* (the *Contractor's Offer*)

The tendering contractor is advised to read both the NEC3 Engineering and Construction Short Contract (April 2013) and the relevant parts of its Guidance Notes (ECSC3-GN)⁵ in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on page 31 of the ECSC3 April 2013 Guidance Notes.

Completion of the data in full is essential to create a complete contract.

10.1	The <i>Contractor</i> is (Name):	[•]
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	E-mail address	[•]
63.2	The percentage for overheads and profit added to the Defined Cost for people is	[•]%
63.2	The percentage for overheads and profit added to other Defined Cost is	[•]%
11.2(9)	The Price List is in	the document called 'Price List' in Part 2 of this contract.
11.2(10)	The offered total of the Prices is [Enter the total of the Prices from the Price List]:	R[•] excluding VAT [in words] [•] excluding VAT

⁵ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 086 539 1902 or www.ecs.co.za.

C2 Pricing Data

C2.1 Pricing assumptions

Entries in the first four columns in the Price List are made either by the *Employer* or the tendering contractor

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

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

All Prices are to be shown excluding VAT unless instructed otherwise by the *Employer* in Tender Data or in an instruction the *Employer* has given before the tenderer enters his Prices.

If there is insufficient space in the Price List which follows, state in which document the Price List is contained.

C2.2 Price List

The Price List is as follows

Item no.	Description	Unit	Quantity	Rate	Price
1	Site Establishment & De - Establishment	Sum	1		
2	Medicals & Induction	Sum	1		
3	SHE File and Admin	Sum	1		
4	Accommodation & Meals	Sum	1		
5	Tools & Equipment	Sum	1		
6	PPE	Sum	1		
7	Transport & Travelling	Sum	1		
8	Site manager	540 hr	1		
9	Supervisor	540 hr	1		
10	Quality Controller	540 hr	1		
11	Safety Officer	540 hr	1		
12	Welder	540 hr	1		
13	Boiler Maker	1080 hr	2		
14	Rigger	540 hr	1		
15	Artisan Fitter	1080 hr	2		
16	General Workers	3240 hr	6		
17	Spares and Consumables – Add Breakdown in Table 2	Sum	1		
The total of the Prices (excluding VAT):					

Spares and Consumables Table 2

STOCK NUMBER	COMPONENT DESCRIPTION	COMPONENT / MATERIAL SPECIFICATION	Qty	Lead time
0715368	Gearbox clutch assembly	Wichita Air Clutch: SSB 336H	2	
0681521	clutch coupling			
712112	Gearbox	Assembly: Gear Unit H2SH18/l=6.410	2	
0654358	Classifier Feed pumps	PUMP, CENTRIFUGAL: SIZE: 125 X 100MM; STAGE: 1; CAPACITY: 171.7 M3/HR; TOTAL HEAD: 78.5 M; NPSH: 5.62 M; SPEED: 2960 RPM; DRIVER: ELECTRIC MOTOR; SPECIFICATION: 125-100-250; MOUNT: HORIZONTAL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	4	
0654190	Lube Oil Filter	FILTER, ELEMENT: TYPE: INSERT; DIMENSIONS: DIA 90 X LG 400 MM; MATERIAL: SS WIRE MESH; FILTERING RETENTION: 45 U; REFERENCE NO: BFD50.140.420/ DN50; PART NO: 1940175;	4	
0654210	Oil Breather	FILTER, OIL: TYPE: BREATHER; DIMENSIONS: DIA 73 X LG 117.5 MM; MATERIAL: POLYIMIDE; MICRON: 3 U	2	

0648912	HEATER,IMM RSN:OIL ;230/400 V ;1.65 KW	HEATER, IMMERSION: TYPE: OIL; DIMENSIONS: WD 140 X LG 175 X HT 95 MM; POTENTIAL: 230/400 V; POWER: 1.65 KW; INSERTION DEPTH: 500MM; TEST PRESSURE: 10BAR; THERMOWELL: DIA 10/9 X 285MM; BUSH MATERIAL: BRS MS4168; HEATING ELEMENT SS; THERMOWELL: RS-STL AISI 316; TERMINAL BOX: SILUMIN; HARD SOLDER; PART NO: BODX165-84106	2	
0654448	PUMP, ASSEMBLY:G REASE PUMP UNIT	PUMP, ASSEMBLY: TYPE: GREASE PUMP UNIT; APPLICATION: FGD BALL MILL MOBILE AND FIXED BEARING GREASING UNIT; ASSEMBLY COMES WITH THE FOLLOWING: PRESSURE GAUGES; BALL VALVE: DN06; PN-500; SAFETY VALVE SVTE; 350BAR R1/4IN 8L;NIVEAU LEVEL SENSOR: LU- SSKL-KG9; PUMP ELEMENT: K7- P203/P205; PUMP ELEMNT: KR- P203/P204	2	
0654454	PUMP, ROTARY:SCR EW ;PORT SZ 90 X 45 MM	PUMP, ROTARY: TYPE: SCREW; PORT SIZE: 90 X 45 MM; CAPACITY: 76 LPM; SPEED:970 RPM;RATING: 1.6 MPA; DRIVER: MOTOR; APPLICATION: FGD BALL MILL BEARING	2	
0654458	PUMP, ROTARY:GRE ASE ;80 M3/MIN	PUMP, ROTARY: TYPE: GREASE; PORT SIZE: 1/4 X 1/4 IN; CAPACITY: 80 M3/MIN;SPEED: 2.8 STR/MIN; RATING: 7500 PSI; DRIVER: AIR MOTOR; APPLICATION: FGD BALL MILL GIRTH GREASING SYSTEM; AIR OPERATED CHASSIS PUMP SERIES J- 82054; MODELNO: 082054; SERIAL NO: 007097	2	
0654460	PUMP, ROTARY:SCR EW ;PORT SZ 70 X 45 MM	PUMP, ROTARY: TYPE: SCREW; PORT SIZE: 70 X 45 MM; CAPACITY: 90 LPM; SPEED:1470 RPM;RATING: 1000 KPA; DRIVER:MOTOR; APPLICATION: FGD BALL MILL BEARING	2	
0654462	PUMP:PISTOL ;SZ 1/2 IN;4 X 2.08 LPM	PUMP: TYPE: PISTOL; SIZE: 1/2 IN; CAPACITY: 4 X2.08 LPM; SPEED: 1470 RPM; RATING:300 KPA; APPLICATION: FGD BALL MILL BEARING LUBRICATION SKID	2	
0654469	BRAKE:CENT RIFUGAL;TRQ 180 NM	BRAKE: TYPE: CENTRIFUGAL; TORQUE: 180 NM; APPLICATION: FGD BALL MILL ICHING DRIVE GEAR; PART NO: FB-180-1- OHNE-WDR	2	
0654472	DRUM, BRAKE:APPL FGD BALL MILL	DRUM, BRAKE: APPLICATION: FGD BALL MILL; LOCATION: BETWEEN INCHING DRIVE AND GEARBOX; DIMENSIONS: DIA 250 MM; MATERIAL: STEEL; DIN15- 435; SPECIFICATION : TE200- EB.220/50; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	2	
0654442	Tape heat Tracing	TAPE, HEAT TRACING: DIMENSIONS: WD 13.3 X THK 5.2 MM; MATERIAL: AL FOIL/TINNED CU; POTENTIAL: 230 V; POWER: 20 W	2	
0635529	60mm ball mill balls		70	
0635528	50mm ball mill balls		80	
0635527	40mm ball mill balls		70	
0635526	30mm ball mill balls		30	
0635525	25mm ball mill balls		20	
0654358	Classifier Feed pump	PUMP, CENTRIFUGAL: SIZE: 125 X 100MM; STAGE: 1; CAPACITY:171.7 M3/HR; TOTAL HEAD:78.5 M; NPSH:5.62 M; SPEED: 2960 RPM; DRIVER: ELECTRIC MOTOR;SPECIFICATION: 125-100-250; MOUNT: HORIZONTAL;	4	
0669691	Grinding Water Control Valve	Cerevalve DN150-65-150 KST	2	
0669704	Dilution water control valve (Classifier Tank)	Cerevalve DN80- 40-80 KST	2	

0659303	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	8	
0637577	Classifier feed pump V-belts	V-belts: SPC 3350	16	
0659313	Butterfly Valve	Butterfly valve DN80, PN10,Lug Type, Drilling Template as per PN10 EN 1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Actuator driven	16	
	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	4	
	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	4	
641558	Ball Mill ceramic Hydrocyclones	150 CVX6	38	
0647319	Classifier pumps		2	
RFC	Ball Mill Inlet Chute		2	
RFC	Progressive Distributer	Lincoln primary Metering grease distributer for the girth gear	2	
RFC	Progressive Distributer	Lincoln Secondary Metering grease distributer SSV4 for the girth gear	2	
RFC	Grease distributer	Lincoln SSV4	8	
RFC	Grease Distributer	Lincoln SSV2 grease Distributer	2	
RFC	Classifier Seal Y-piece	DN200 reinforced rubber hose	2	
RFC	Lube oil cooler	Oil-watercooler P=45kW, TH2O= 34°C, 4m³/h, dp<0,2bar P10-2P- L=1500 MV15 internally coated	2	
RFC	Lubrication system NRV		2	
RFC	Lube oil system Pressure regulator		2	
RFC	Oil water cooler isolation valve		2	
RFC	Filter K7 fan assembly		2	
RFC	Radial and thrust bearings, Grease lubricated antifriction		2	
RFC	Bolt assembly		2	
681522	PINION		2	
	BEARING ASSEMBLY		2	
Needs to be DCF	Liners			

C3: Scope of Work

C3.1 Works Information

1. Description of the works

FGD Ball mill 23 has been out of service for 3 years due to a girth gear failure. Due to the lack of preservation of many components on the mill while it was out of service, full repair of the ball mill is required to ensure that the mill is fully operational after all required repairs. **The works include the repair as well as the supply of the required spares for Ball Mill 23.**

MECHANICAL SCOPE OF WORK

The List below contains various inspections that are required, however if items are found to be malfunctioning a repair/replacement scope must be executed.

No	KKS	Description	Preliminary Scope
1	0 0HTK21AA601	REAGENT DAY BIN PRESSURE RELIEF VALVE	Inspect for damage
2	0 0HTK21AN001	REAGENT DAY BIN DUST FILTER FAN	Inspect for damage
3	0 0HTK21AN001-M01	REAGENT DAY BIN DUST FILTER FAN MOTOR	Lubricate Bearings
4	0 0HTK21AT001	REAGENT DAY BIN DUST FILTER	To be inspected and cleaned. Inspect rubber bags, cages, hoses and clamps
5	0 0HTK21BB002-M01	REAGENT DAY BIN VIBRATING CONE HOPPER MOTOR	Lubricate Bearings
6	0 0HTK21BR001MR01	REAGENT DAY BIN EXPANSION JOINT 1	Inspect for damage and tears
7	0 0HTK21BR001-MR01	REAGENT DAY BIN EXPANSION JOINT 2	Inspect for damage and tears
8	0 0HTK22AA501	REAGENT DAY BIN WEIGH BELT FEEDER LIMESTONE ISOLATING VALVE	Check for damage and lubricate
9	0 0HTK22AF001-M01	BALL MILL WEIGH BELT FEEDER DRIVE MOTOR	Lubricate Bearings
10	0 0HTK22AF001MG01	BALL MILL WEIGH BELT FEEDER DRIVE GEARBOX	Oil change
11	0 0HTK22AF001MG01	BALL MILL WEIGH BELT FEEDER DRIVE GEARBOX	Inspect for damage
12	0 0HTK22AF001MK01	BALL MILL WEIGH BELT FEEDER DRIVE COUPLING	Inspect for damage
13	0 0HTK23AA401	BALL MILL CLASSIFIER FEED TANK DRAIN VALVE	Inspect for wear and damage
14	0 0HTK23AA402	BALL MILL CLASSIFIER FEED TANK FLUSH DRAIN VALVE	Inspect for wear and damage
15	0 0HTK23AJ001	WET BALL MILL	Open Mill tube Inspection doors
16	0 0HTK23AJ001	WET BALL MILL	Mill Liner inspection and replacement
17	0 0HTK23AJ001	WET BALL MILL	Inlet Cone Inspection
18	0 0HTK23AJ001	WET BALL MILL	Outlet Cone Inspection and rubber lining repair with natural rubber
19	0 0HTK23AJ001	WET BALL MILL	Inlet Feed box replacement with hardox lined feedbox

20	0 0HTK23AJ001	WET BALL MILL	Flush the trommel screen. Trommel screen inspection after flush. Remove ball chips from screen
21	0 0HTK23AJ001	WET BALL MILL	Outlet Scroll Inspection and rubber lining replacement
22	0 0HTK23AJ001KE01	BALL MILL GIRTH GEAR PINION GEAR ASSEMBLY	MPI and Hardness Test
23	0 0HTK23AJ001KE01	BALL MILL GIRTH GEAR PINION GEAR ASSEMBLY	Root gap and backlash (Initial cold condition 2-2.5 mm)
24	0 0HTK23AJ001KE01	BALL MILL GIRTH GEAR PINION GEAR ASSEMBLY	Repair/Replace
25	0 0HTK23AJ001KN01	BALL MILL INCHING DRIVE GEARBOX COOLING FAN	Inspect
26	0 0HTK23AJ001-M03	BALL MILL DRUM BRAKE	Inspect brake shoe, brake lining, bushings, spring, thruster and lining wear compensator
27	0 0HTK23AJ001MG01	BALL MILL MAIN DRIVE GEARBOX	Replace
28	0 0HTK23AJ001MG02	BALL MILL INCHING DRIVE GEARBOX	Inspect and Repair
29	0 0HTK23AJ001MK01	BALL MILL AIR CLUTCH	Replace
30	0 0HTK23AJ001MK02	BALL MILL MAIN DRIVE TO MAIN GEARBOX COUPLING	Inspect
31	0 0HTK23AJ001MK03	BALL MILL INCHING DRIVE GEARBOX TO MAIN GEAR BOX COUPLING	Inspect
32	0 0HTK23AJ001MK04	BALL MILL INCHING DRIVE TO INCHING DRIVE GEARBOX COUPLING	Inspect
33	0 0HTK23AM001	BALL MILL CLASSIFIER FEED TANK AGITATOR	Inspect for damage by removing dirt and crusts. Check for wear, corrosion and damage. Tighten all treaded joints
34	0 0HTK23AM001KM01	BALL MILL CLASSIFIER FEED TANK AGITATOR MIXER	Check impeller and possible replacement of gaskets for impeller hub. Inspect for pits and dents
35	0 0HTK23AM001-M01	BALL MILL CLASSIFIER FEED TANK AGITATOR MOTOR	Lubricate bearings
36	0 0HTK23AM001MG01	BALL MILL CLASSIFIER FEED TANK AGITATOR GEARBOX	Oil change (2 yearly)
37	0 0HTK23AM001MG01	BALL MILL CLASSIFIER FEED TANK AGITATOR GEARBOX	Inspect bearings and couplings
38	0 0HTK23AT001	BALL MILL DISCHARGE SCREEN BOX	Inspect for damage and clean
39	0 0HTK23BB001	BALL MILL CLASSIFIER FEED TANK	Inspect for damage on rubber lining. Rubber delamination should be repaired
40	0 0HTK23HD001	BALL MILL MOBILE TRUNNION BEARING	Inspect for flattening and replace housing double lip seals
41	0 0HTK23HD002	BALL MILL FIXED TRUNNION BEARING	Inspect for flattening and replace housing double lip seals
42	0 0HTK24AA101	BALL MILL CLASSIFIER FEED PUMP SUCTION MOTOR OPERATED VALVE	Missing. Replace
43	0 0HTK24AA102	BALL MILL CLASSIFIER FEED PUMP DISCHARGE FLUSH WATER MOV	Inspect
44	0 0HTK24AA151	BALL MILL CLASSIFIER FEED PUMP SUCTION DRAIN MOV	Missing. Replace
45	0 0HTK24AA301	BALL MILL CLASSIFIER FEED PUMP DISCHARGE PI ISOLATING VALVE	Check isolation valve (Open/Close)
46	0 0HTK24AA401	CLASSIFIER FEED PUMP THERMOSYPHON TNK SLWTR CIRC	Inspect

		VALVE	
47	0 0HTK24AA601	CLASSIFIER FEED PUMP THERMOSYPHON TANK AIR VENT VALVE	Inspect
48	0 0HTK24AP001	BALL MILL CLASSIFIER FEED PUMP	Missing. Replace
49	0 0HTK24AP001MK01	BALL MILL CLASSIFIER FEED PUMP V- BELT DRIVE	Replace vbelts
50	0 0HTK24BB001	CLASSIFIER FEED PUMP THERMOSYPHON TANK	Inspect
51	0 0HTK24BR001-MR01	CLASSIFIER FEED PUMP BELLOW	Inspect for damage and tears
52	00HTK24BR002-MR01	CLASSIFIER FEED PUMP BELLOW	Inspect for damage and tears
53	0 0HTK25AA101	BALL MILL CLASSIFIER FEED PUMP SUCTION MOTOR OPERATED VALVE	Missing. To be procured
54	0 0HTK25AA102	BALL MILL CLASSIFIER FEED PUMP DISCHARGE FLUSH WATER MOV	Inspect
55	0 0HTK25AA151	BALL MILL CLASSIFIER FEED PUMP SUCTION DRAIN MOV	Missing. To be procured
56	0 0HTK25AA301	BALL MILL CLASSIFIER FEED PUMP DISCHARGE PI ISOLATING VALVE	Inspect
57	0 0HTK25AA401	CLASSIFIER FEED PUMP THERMOSYPHON TNK SLWTR CIRC VALVE	Inspect
58	0 0HTK25AA601	CLASSIFIER FEED PUMP THERMOSYPHON TANK AIR VENT VALVE	Inspect
59	0 0HTK25AP001	BALL MILL CLASSIFIER FEED PUMP	Missing. Replace
60	0 0HTK25AP001MK01	BALL MILL CLASSIFIER FEED PUMP V- BELT DRIVE	Replace vbelts
61	0 0HTK25BB001	CLASSIFIER FEED PUMP THERMOSYPHON TANK	Inspect
62	0 0HTK25BR001-MR01	CLASSIFIER FEED PUMP BELLOW	Inspect
63	0 0HTK25BR002-MR01	CLASSIFIER FEED PUMP BELLOW	Inspect
64	0 0HTK26AA101	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY MOV	Missing. To be procured
65	0 0HTK26AA102	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY MOV	Inspect for damage
66	0 0HTK26AA111	BALL MILL CLASSIFIER HYDROCYCLONE RECYCLE MODE MOV	Inspect for damage
67	0 0HTK26AA112	BALL MILL CLASSIFIER HYDROCYCLONE PRODUCTION MODE MOV	Inspect for damage
68	0 0HTK26AA151	BALL MILL CLASSIFIER HYDROCYCLONE DISCHARGE DRAIN MOV	Inspect for damage
69	0 0HTK26AA401	BALL MILL CLASSIFIER HYDROCYCLONE DISCHARGE VENT CHECK VALVE	Inspect
70	0 0HTK26AA402	BALL MILL CLASSIFIER HYDROCYCLONE DISCHARGE VENT CHECK VALVE	Inspect
71	0 0HTK26AA501	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
72	0 0HTK26AA502	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal

73	0 0HTK26AA503	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
74	0 0HTK26AA504	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
75	0 0HTK26AA505	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
76	0 0HTK26AA506	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
77	0 0HTK26AA507	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
78	0 0HTK26AA508	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
79	0 0HTK26AA509	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
80	0 0HTK26AA510	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
81	0 0HTK26AA511	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Inspect Knife gate for damage. Open and close valve to ensure a tight seal
82	0 0HTK26AA512	BALL MILL CLASSIFIER HYDROCYCLONE SUPPLY ISOLATING VALVE	Replace valve
83	0 0HTK26AA701	BALL MILL CLASSIFIER HYDROCYCLONE SAMPLING POINT VALVE	Unblock and clean all slurry in the line
84	0 0HTK26AA702	BALL MILL CLASSIFIER HYDROCYCLONE SAMPLING POINT VALVE	Unblock and clean all slurry in the line
85	0 0HTK26AT001	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
86	0 0HTK26AT002	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
87	0 0HTK26AT003	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
88	0 0HTK26AT004	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
89	0 0HTK26AT005	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
90	0 0HTK26AT006	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
91	0 0HTK26AT007	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
92	0 0HTK26AT008	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
93	0 0HTK26AT009	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
94	0 0HTK26AT010	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
95	0 0HTK26AT011	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
96	0 0HTK26AT012	BALL MILL CLASSIFIER	Missing, replace with new

		HYDROCYCLONE	ceramic
97	0 0HTK26AT013	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
98	0 0HTK26AT014	BALL MILL CLASSIFIER HYDROCYCLONE	Missing, replace with new ceramic
99	0 0HTK26BB001	BALL MILL CLASSIFIER HYDROCYCLONE SEPARATOR MANIFOLD	Unblock, clean all slurry in the line and repair
100	0 0HTK26BB002	BALL MILL CLASSIFIER HYDROCYCLONE UNDERFLOW LAUNDER	Unblock, clean all slurry in the line and repair
101	0 0HTK26BB003	BALL MILL CLASSIFIER HYDROCYCLONE OVERFLOW LAUNDER	Unblock, clean all slurry in the line and repair
102	0 0HTK27AA401	BALL MILL TRUNNION BEARING OIL LUBE OIL TANK DRAIN VALVE	Check isolation valve (Open/Close)
103	0 0HTK27AA510	B.MILL TRUNNION BRG OIL CNDTN OIL SUPL ISOLATING VALVE	Check isolation valve (Open/Close)
104	0 0HTK27AA511	BALL MILL TRUNNION BEARING OIL LUBE DUPLEX FILTER SUPPLY IV	Check isolation valve (Open/Close)
105	0 0HTK27AA512	BALL MILL TRUNNION BEARING OIL LUBE DUPLEX FILTER DISCH IV	Check isolation valve (Open/Close)
106	0 0HTK27AA513	B.MILL TRUNNION BRG OIL CONDITIONING OIL SUPL CONTROL VALVE	Check isolation valve (Open/Close)
107	0 0HTK27AA521	BALL MILL TRUNNION BEARING OIL LUBRICATION LOCAL LP IV	Check isolation valve (Open/Close)
108	0 0HTK27AA522	BALL MILL TRUNNION BEARING OIL LUBRICATION LOCAL LP IV	Check isolation valve (Open/Close)
109	0 0HTK27AA523	BALL MILL TRUNNION BEARING OIL LUBRICATION LOCAL LP IV	Check isolation valve (Open/Close)
110	0 0HTK27AA524	BALL MILL TRUNNION BEARING OIL LUBRICATION LOCAL LP IV	Check isolation valve (Open/Close)
111	0 0HTK27AA561	BALL MILL MAIN DRIVE GEARBOX OIL LUBE DUPLEX FILTER DISCH IV	Check isolation valve (Open/Close)
112	0 0HTK27AA611	B.MILL TRUNNION BRG OIL LUBE CNDTN OIL PMP CHECK VALVE	Inspect
113	0 0HTK27AA612	B.MILL TRUNNION BRG OIL LUBE STANDBY OIL PMP CHECK VALVE	Inspect
114	0 0HTK27AA613	BALL MILL TRUNNION BEARING OIL LUBE CNDTN OIL PUMP PRV	Inspect
115	0 0HTK27AA614	BALL MILL TRUNNION BEARING OIL LUBE CONDITIONING PRV	Inspect
116	0 0HTK27AA621	BALL MILL TRUNNION BEARING OIL LUBE LP OIL PUMP CHECK VALVE	Inspect
117	0 0HTK27AA622	BALL MILL TRUNNION BEARING OIL LUBE CONDITIONING PRV	Inspect
118	0 0HTK27AA631	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
119	0 0HTK27AA632	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
120	0 0HTK27AA633	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
121	0 0HTK27AA634	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
122	0 0HTK27AA635	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
123	0 0HTK27AA636	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect

124	0 0HTK27AA637	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
125	0 0HTK27AA638	BALL MILL TRUNNION BEARING OIL LUBE HP OIL PUMP CHECK VALVE	Inspect
126	0 0HTK27AA639	BALL MILL TRUNNION BEARING OIL LUBRICATION HP OIL PUMP PRV	Inspect
127	0 0HTK27AA651	BALL MILL GEAR LUBRICATION GREASE PUMP SUPL IV	Inspect
128	0 0HTK27AA652	BALL MILL GEAR LUBRICATION GREASE PUMP SUPL IV	Inspect
129	0 0HTK27AA653	BALL MILL GEAR LUBRICATION GREASE PUMP SUPL IV	Inspect
130	0 0HTK27AA661	BALL MILL MAIN DRIVE GEARBOX OIL LUBRICATION PUMP PRV	Inspect
131	0 0HTK27AC011	BALL MILL TRUNNION BEARING OIL LUBE CONDITIONING OIL COOLER	Inspect for damage
132	0 0HTK27AC061	BALL MILL MAIN DRIVE GEARBOX OIL LUBE OIL COOLER	Inspect for damage
133	0 0HTK27AH001	BALL MILL TRUNNION BEARING OIL LUBRICATION OIL TANK HEATER	Missing, replace
134	0 0HTK27AP011	B.MILL TRUNNION BEARING OIL LUBE CONDITIONING OIL PUMP	Inspect for damage
135	0 0HTK27AP011MK01	B.MILL TRUNNION BEARING OIL LUBE CONDITIONING OIL PMP CPL	Inspect
136	0 0HTK27AP012	BALL MILL TRUNNION BEARING OIL LUBE STANDBY OIL PUMP	Inspect
137	0 0HTK27AP012MK01	BALL MILL TRUNNION BEARING OIL LUBE STANDBY OIL PMP COUPLING	Inspect
138	0 0HTK27AP021	BALL MILL TRUNNION BEARING OIL LUBE LP OIL PUMP	Inspect
139	0 0HTK27AP021MK01	BALL MILL TRUNNION BEARING OIL LUBE LP OIL PUMP COUPLING	Inspect
140	0 0HTK27AP031	BALL MILL TRUNNION BEARING OIL LUBRICATION HP OIL PUMP	Inspect
141	0 0HTK27AP031MK01	BALL MILL TRUNNION BEARING OIL LUBRICATION HP OIL PUMP CPL	Inspect
142	0 0HTK27AP051	BALL MILL GEAR LUBRICATION GREASE BARREL PUMP	Inspect
143	0 0HTK27AP052	BALL MILL BEARING SEAL GREASE PUMP	Inspect
144	0 0HTK27AP061	BALL MILL MAIN DRIVE GEARBOX OIL LUBRICATION PUMP	Inspect
145	0 0HTK27AP061MK01	BALL MILL MAIN DRIVE GEARBOX OIL LUBRICATION PUMP COUPLING	Inspect
146	0 0HTK27AT001	BALL MILL TRUNNION BEARING OIL LUBE OIL TANK VENT FILTER	Clean
147	0 0HTK27AT002	BALL MILL TRUNNION BEARING OIL LUBE OIL TANK VENT FILTER	Clean
148	0 0HTK27AT011	BALL MILL TRUNNION BEARING OIL LUBE DUPLEX FILTER	Clean
149	0 0HTK27AT012	BALL MILL TRUNNION BEARING OIL LUBE DUPLEX FILTER	Clean
150	0 0HTK27AT053	BALL ML GEAR LUBE GREASE BARREL PUMP DISCHARGE GREASE FILTER	Clean
151	0 0HTK27AT061	BALL MILL MAIN DRIVE GEARBOX OIL LUBRICATION DUPLEX FILTER	Clean
152	0 0HTK27AT062	BALL MILL MAIN DRIVE GEARBOX OIL LUBRICATION DUPLEX FILTER	Clean
153	0 0HTK27BB001	BALL MILL TRUNNION BEARING OIL	Empty oil tank and Refill with

		LUBRICATION OIL TANK	new oil
154	0 0HTK27BB001	BALL MILL TRUNNION BEARING OIL LUBRICATION OIL TANK	Inspect
155	0 0HTK27BB051	BALL MILL GEAR LUBRICATION GREASE PUMP BARREL	Inspect
156	0 0HTK27BB052	BALL MILL GEAR LUBRICATION GREASE BARREL	Inspect
157	0 0HTK28AA101	BALL MILL CLASSIFIER HYDROCYCLONE DISCHARGE MOV	Inspect for damage
158	0 0HTK29AA101	BALL MILL CLASSIFIER HYDROCYCLONE DISCHARGE MOV	Inspect for damage
159	0 0HTN65AA401	RECLAIM WATER DISTRIBUTION TO BALL MILL SAMPLING VALVE	Check valve (Open/Close)
160	0 0HTN65AA513	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Check isolation valve (Open/Close)
161	0 0HTN65AA514	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Check isolation valve (Open/Close)
162	0 0HTN65AA515	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Check isolation valve (Open/Close)
163	0 0HTN71AA501	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Check isolation valve (Open/Close)
164	0 0HTN71AA502	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Check isolation valve (Open/Close)
165	0 0HTN72AA011	B.MILL CLASSIFIER FEED TNK DILUTION WTR SUPL LEVEL CTRL MOV	Missing. To be procured
166	0 0HTN72AA021	BALL MILL GRINDING WATER SUPPLY CONTROL MOV	Damaged, Replace
167	0 0HTN72AA121	BALL MILL CLASSIFIER FEED PUMP DISCHARGE FLUSH WATER MOV	Missing. To be procured
168	0 0HTN72AA122	BALL MILL CLASSIFIER FEED PUMP DISCHARGE FLUSH WATER MOV	Missing. To be procured
169	0 0HTN72AA411	BALL MILL CLASSIFIER FEED TNK DILUTION WATER SUPL DRN VALVE	Inspect for damage
170	0 0HTN72AA421	BALL MILL RECLAIM GRINDING WATER SUPPLY DRAIN VALVE	Inspect for damage
171	0 0HTN72AA501	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Inspect for damage
172	0 0HTN72AA502	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Inspect for damage
173	0 0HTN72AA511	B.MILL CLASSIFIER FEED TNK DILUTION WTR SUPL ISOLATING VALVE	Handle missing
174	0 0HTN72AA512	B.MILL CLASSIFIER FEED TNK DILUTION WTR SUPL ISOLATING VALVE	Missing. To be procured
175	0 0HTN72AA513	B.MILL CLASSIFIER FEED TNK DILUTION WTR SUPL BYPASS VALVE	Inspect for damage
176	0 0HTN72AA514	BALL MILL GRINDING WATER SUPPLY ISOLATING VALVE	Replace
177	0 0HTN72AA515	BALL MILL CLASSIFIER HYDROCYCLONE FLUSH WTR ISOLATING VALVE	Inspect for damage
178	0 0HTN72AA521	BALL MILL GRINDING WATER SUPPLY ISOLATING VALVE	Inspect for damage
179	0 0HTN72AA522	BALL MILL GRINDING WATER SUPPLY ISOLATING VALVE	Inspect for damage
180	0 0HTN72AA523	BALL MILL GRINDING WATER SUPPLY BYPASS VALVE	Inspect for damage
181	0 0HTN72AA524	BALL MILL GRINDING WATER SUPPLY ISOLATING VALVE	Inspect for damage

182	0 0HTN73AA501	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Inspect for damage
183	0 0HTN73AA502	RECLAIM WATER DISTRIBUTION TO BALL MILL ISOLATING VALVE	Inspect for damage
184	0 0HTQ73AA506	COMMON UNIT HOLDING RECYCLE DAM WATER DISTR ISOLATING VALVE	Inspect for damage
185	0 0HTQ73AA507	COMMON UNIT HOLDING RECYCLE DAM WATER DISTR ISOLATING VALVE	Inspect for damage
186	0 0HTQ77AA401	CLASSIFIER FEED PUMP SEAL WATER SUPPLY DRAIN VALVE	Check valve (Open/Close)
187	0 0HTQ77AA402	CLASSIFIER FEED PUMP SEAL WATER SUPPLY DRAIN VALVE	Check valve (Open/Close)
188	0 0HTQ77AA501	COMMON UNIT RAW WATER DISTRIBUTION ISOLATING VALVE	Inspect for damage
189	0 0HTQ77AA505	CLASSIFIER FEED PUMP SEAL WATER SUPPLY ISOLATING VALVE	Check valve (Open/Close)
190	0 0HTQ77AA506	CLASSIFIER FEED PUMP SEAL WATER SUPPLY ISOLATING VALVE	Check valve (Open/Close)
191	0 0HTQ85AA601	CLASSIFIER FEED PUMP THERMOSYPHON TNK SLWTR SUPL CHECK VALVE	Inspect
192	0 0HTQ85AA602	CLASSIFIER FEED PUMP THERMOSYPHON TNK SLWTR SUPL CHECK VALVE	Inspect
193	0 0PGB71AA531	BALL MILL LUBE CW DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
194	0 0PGB71AA532	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
195	0 0PGB71AA533	BALL MILL LUBE CW DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
196	0 0PGB71AA534	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
197	0 0PGB71AA535	BALL MILL LUBE CW DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
198	0 0PGB71AA536	BALL MILL LUBE COOLING WATER DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
199	0 0PGB71AA537	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
200	0 0PGB71AA538	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
201	0 0PGB78AA511	BALL MILL LUBE COOLING WATER DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
202	0 0PGB78AA512	BALL MILL LUBE COOLING WATER RETURN CONTROL VALVE	Check isolation valve (Open/Close)
203	0 0PGB78AA513	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
204	0 0PGB78AA521	BALL MILL LUBE COOLING WATER DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
205	0 0PGB78AA522	BALL MILL LUBE COOLING WATER RETURN CONTROL VALVE	Check isolation valve (Open/Close)
206	0 0PGB78AA523	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
207	0 0PGB78AA531	BALL MILL LUBE COOLING WATER DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
208	0 0PGB78AA532	BALL MILL LUBE COOLING WATER RETURN CONTROL VALVE	Inspect for damage
209	0 0PGB78AA533	BALL MILL LUBE COOLING WATER RETURN ISOLATING VALVE	Check isolation valve (Open/Close)
210	0 0PGB78AA612	B.MILL MAIN DRIVE GEARBOX OIL	Inspect for damage

		LUBRICATION CW REGULATOR VALVE	
211	0 0QEB73AA502	BALL MILL AREA SERVICE AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
212	0 0QEB73AA503	BALL MILL AREA SERVICE AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
213	0 0QEB73AA504	BALL MILL AREA SERVICE AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
214	0 0QEB75AA506	REAGENT DAYBIN & BALL MILL LUBE PROCESS AIR DISTRIBUTION IV	Check isolation valve (Open/Close)
215	0 0QEB78AA501	COMMON UNIT PROCESS AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
216	0 0QEB78AA502	COMMON UNIT PROCESS AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
217	0 0QEB78AA521	REAGENT DAYBIN PROCESS AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
218	0 0QEB78AA522	REAGENT DAY BIN DUST FILTER CLEANING SOLENOID VALVE	Check isolation valve (Open/Close)
219	0 0QEB78AA523	BALL MILL LUBE PROCESS AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)
220	0 0QEB78AA524	BALL MILL GREASE BARREL PUMPAIR SUPPLY ISOLATING VALVE	Check isolation valve (Open/Close)
221	0 0QEB78AA542	AIR CLUTCH SKID PROCESS AIR SUPPLY ISOLATING VALVE	Check isolation valve (Open/Close)
222	0 0QEB78AA601	COMMON UNIT PROCESS AIR DISTRIBUTION NON-RETURN VALVE	Inspect
223	0 0QEB78AA613	REAGENT DAY BIN PROCESS AIR SUPPLY ISOLATING VALVE	Check isolation valve (Open/Close)
224	0 0QEB78AA621	BALL MILL SPRAY NOZZLE PLATE UNIT AIR FILTER REGULATOR ASSEM	Inspect
225	0 0QEB78AA622	BALL MILL GREASE BARREL PUMPAIR FILTER REGULATOR ASSEM	Inspect
226	0 0QEB78AA623	REAGENT DAY BIN PROCESS AIR SUPPLY ISOLATING VALVE	Check isolation valve (Open/Close)
227	0 0QEB78AA641	AIR CLUTCH SKID PROCESS AIR SUPPLY CONTROL VALVE	Inspect
228	0 0QEB78AA642	AIR CLUTCH SKID PROCESS AIR SUPPLY CHECK VALVE	Inspect
229	0 0QEB78AA651	AIR CLUTCH SKID PROCESS AIR SUPPLY CONTROL VALVE	Inspect
230	0 0QEB78AA652	AIR CLUTCH SKID PROCESS AIR SUPPLY CHECK VALVE	Inspect
231	0 0QEB78AA661	AIR CLUTCH SKID DISCHARGE AIR CONTROL VALVE	Inspect
232	0 0QEB78AA662	AIR CLUTCH SKID DISCHARGE AIR CONTROL VALVE	Inspect
233	0 0QEB78AA663	AIR CLUTCH SKID DISCHARGE AIR CONTROL VALVE	Inspect
234	0 0QEB78AA671	AIR CLUTCH SKID PROCESS AIR SUPPLY CHECK VALVE	Inspect
235	0 0QEB78AA672	AIR CLUTCH SKID PROCESS AIR SUPPLY PRESSURE RELIER VALVE	Inspect
236	0 0QEB78AA673	AIR CLUTCH SKID PROCESS AIR SUPPLY CHECK VALVE	Inspect
237	0 0QEB78AA674	AIR CLUTCH SKID PROCESS AIR SUPPLY PRESSURE RELIER VALVE	Inspect
238	0 0QEB78AN041	AIR CLUTCH SKID AIR COMPRESSOR	Inspect
239	0 0QEB78AN051	AIR CLUTCH SKID AIR COMPRESSOR	Inspect
240	0 0QEB78AT021	BALL MILL SPRAY NOZZLE PLATE UNIT	Clean Filter

		AIR FILTER	
241	0 0QEB78AT022	BALL MILL GREASE BARREL PUMPAIR FILTER	Clean Filter
242	0 0QEB78BB041	AIR CLUTCH SKID AIR RECEIVER TANK	Inspect
243	0 0QEB78BB051	AIR CLUTCH SKID AIR RECEIVER TANK	Inspect
244	0 0QFB73AA501	COMMON UNIT INSTRUMENT AIR DISTRIBUTION ISOLATING VALVE	Check isolation valve (Open/Close)

BALL MILL RECOMMISSIONING

After all the repair/replacement SOW has been completed the following ball mill systems must be recommissioned:

- Verify that all C&I components and switches are active
- Perform empty commissioning of the weigh feeder and vibro feeders
- Ball mill trunnion bearing lube oil system first run and inspection
- Perform grease lubrication and seal grease commissioning and test run
- Fill ball mill with first fill of mill balls
- Verify operation of reclaim water feed valves, classifier feed valves, hydrocyclone feed and discharge valves
- Verify operation of classifier agitator
- Test run classifier feed pumps in recirc and in destination configuration without the ball mill running
- Test run the ball mill un recirc mode with no limestone feed
- Test run the ball mill with limestone feed in recirc mode
- Test run the ball mill with limestone feed in production mode
- Perform ball mill 36 hour production reliability run
- Inspect ball mill for any defects and correct

ENVIRONMENTAL CONDITIONS

The conditions which the spare parts must be able to withstand are as follows;

	Unit	Value
Conductivity	µS/cm	1110
Total alkalinity	mg/l CaCO ₃	347
pH		7 – 10
TSS	mg/l	< 50
TDS	mg/l	1046
Cl	mg/l	30 000

QUALITY REQUIREMENTS

Eskom is ISO 9001:2015 certified, it is therefore important that the contractor complies with the requirements of ISO 9001:2015 quality standard.

RESOURCE BREAKDOWN

Table 1

The list of required resources to be populated and rates indicated

	Quantity (No)	Quantity(Estimatedhours)	Rate	Price
Site manager	1	540		

Supervisor	1	540		
Quality Controller	1	540		
Safety Officer	1	540		
Welder	1	540		
Boiler Maker	2	1080		
Rigger	1	540		
Artisan Fitter	2	1080		
General Workers	6	3240		
TOTAL				

REQUIRED SPARES

The spares below are a minimum indicative of what is required. The Contractor is to assess and validate the list, to procure, supply and install all spares required for the scope of work. Lead time for each spares item to be indicated.

Table 2

STOCK NUMBER	COMPONENT DESCRIPTION	COMPONENT / MATERIAL SPECIFICATION	Qty	Lead time
0715368	Gearbox clutch assembly	Wichita Air Clutch: SSB 336H	2	
0681521	clutch coupling			
712112	Gearbox	Assembly: Gear Unit H2SH18/I=6.410	2	
0654358	Classifier Feed pumps	PUMP, CENTRIFUGAL: SIZE: 125 X 100MM; STAGE: 1; CAPACITY: 171.7 M3/HR; TOTAL HEAD: 78.5 M; NPSH: 5.62 M; SPEED: 2960 RPM; DRIVER: ELECTRIC MOTOR; SPECIFICATION: 125-100-250; MOUNT: HORIZONTAL; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	4	
0654190	Lube Oil Filter	FILTER, ELEMENT: TYPE: INSERT; DIMENSIONS: DIA 90 X LG 400 MM; MATERIAL: SS WIRE MESH; FILTERING RETENTION: 45 U; REFERENCE NO: BFD50.140.420/ DN50; PART NO: 1940175;	4	
0654210	Oil Breather	FILTER, OIL: TYPE: BREATHER; DIMENSIONS: DIA 73 X LG 117.5 MM; MATERIAL: POLYIMIDE; MICRON: 3 U	2	
0648912	HEATER, IMM RSN: OIL ;230/400 V ;1.65 KW	HEATER, IMMERSION: TYPE: OIL; DIMENSIONS: WD 140 X LG 175 X HT 95 MM; POTENTIAL: 230/400 V; POWER: 1.65 KW; INSERTION DEPTH: 500MM; TEST PRESSURE: 10BAR; THERMOWELL: DIA 10/9 X 285MM; BUSH MATERIAL: BRS MS4168; HEATING ELEMENT SS; THERMOWELL: RS-STL AISI 316; TERMINAL BOX: SILUMIN; HARD SOLDER; PART NO: BODX165-84106	2	
0654448	PUMP, ASSEMBLY: GREASE PUMP UNIT	PUMP, ASSEMBLY: TYPE: GREASE PUMP UNIT; APPLICATION: FGD BALL MILL MOBILE AND FIXED BEARING GREASING UNIT; ASSEMBLY COMES WITH THE FOLLOWING: PRESSURE GAUGES; BALL VALVE: DN06; PN-500; SAFETY VALVE SVTE; 350BAR R1/4IN 8L; NIVEAU LEVEL SENSOR: LU- SSKL-KG9; PUMP ELEMENT: K7- P203/P205; PUMP ELEMNT: KR- P203/P204	2	
0654454	PUMP, ROTARY: SCR EW ;PORT SZ 90 X 45 MM	PUMP, ROTARY: TYPE: SCREW; PORT SIZE: 90 X 45 MM; CAPACITY: 76 LPM; SPEED: 970 RPM; RATING: 1.6 MPA; DRIVER: MOTOR; APPLICATION: FGD BALL MILL BEARING	2	

0654458	PUMP, ROTARY:GRE ASE ;80 M3/MIN	PUMP, ROTARY: TYPE: GREASE; PORT SIZE: 1/4 X 1/4 IN; CAPACITY: 80 M3/MIN;SPEED: 2.8 STR/MIN; RATING: 7500 PSI; DRIVER: AIR MOTOR; APPLICATION: FGD BALL MILL GIRTH GREASING SYSTEM; AIR OPERATED CHASSIS PUMP SERIES J- 82054; MODELNO: 082054; SERIAL NO: 007097	2	
0654460	PUMP, ROTARY:SCR EW ;PORT SZ 70 X 45 MM	PUMP, ROTARY: TYPE: SCREW; PORT SIZE: 70 X 45 MM; CAPACITY: 90 LPM; SPEED:1470 RPM;RATING: 1000 KPA; DRIVER:MOTOR; APPLICATION: FGD BALL MILL BEARING	2	
0654462	PUMP:PISTOL ;SZ 1/2 IN;4 X 2.08 LPM	PUMP: TYPE: PISTOL; SIZE: 1/2 IN; CAPACITY: 4 X2.08 LPM; SPEED: 1470 RPM; RATING:300 KPA; APPLICATION: FGD BALL MILL BEARING LUBRICATION SKID	2	
0654469	BRAKE:CENT RIFUGAL;TRQ 180 NM	BRAKE: TYPE: CENTRIFUGAL; TORQUE: 180 NM; APPLICATION: FGD BALL MILL ICHING DRIVE GEAR; PART NO: FB-180-1- OHNE-WDR	2	
0654472	DRUM, BRAKE:APPL FGD BALL MILL	DRUM, BRAKE: APPLICATION: FGD BALL MILL; LOCATION: BETWEEN INCHING DRIVE AND GEARBOX; DIMENSIONS: DIA 250 MM; MATERIAL: STEEL; DIN15- 435; SPECIFICATION : TE200- EB.220/50; VENDORS ARE RESPONSIBLE FOR ENSURING THAT THEY ARE PERFORMING AGAINST THE CORRECT DRAWING REVISION NUMBER (IF APPLICABLE).	2	
0654442	Tape heat Tracing	TAPE, HEAT TRACING: DIMENSIONS: WD 13.3 X THK 5.2 MM; MATERIAL: AL FOIL/TINNED CU; POTENTIAL: 230 V; POWER: 20 W	2	
0635529	60mm ball mill balls		70	
0635528	50mm ball mill balls		80	
0635527	40mm ball mill balls		70	
0635526	30mm ball mill balls		30	
0635525	25mm ball mill balls		20	
0654358	Classifier Feed pump	PUMP, CENTRIFUGAL: SIZE: 125 X 100MM; STAGE: 1; CAPACITY:171.7 M3/HR; TOTAL HEAD:78.5 M; NPSH:5.62 M; SPEED: 2960 RPM; DRIVER: ELECTRIC MOTOR;SPECIFICATION: 125-100-250; MOUNT: HORIZONTAL;	4	
0669691	Grinding Water Control Valve	Cerevalve DN150-65-150 KST	2	
0669704	Dilution water control valve (Classifier Tank)	Cerevalve DN80- 40-80 KST	2	
0659303	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	8	
0637577	Classifier feed pump V- belts	V-belts: SPC 3350	16	
0659313	Butterfly Valve	Butterfly valve DN80, PN10,Lug Type, Drilling Template as per PN10 EN 1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Actuator driven	16	
	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	4	
	Butterfly Valve	Butterfly valve DN50, PN10, Lug Type, Drilling Template as per PN10 EN1092-1, Disk body & Bonnet material: ASTM A536 Gr.65-45- 12 EPDM (Synthetic Rubber) LINED, Hand driven	4	
641558	Ball Mill ceramic Hydrocyclones	150 CVX6	38	

0647319	Classifier pumps		2	
RFC	Ball Mill Inlet Chute		2	
RFC	Progressive Distributer	Lincoln primary Metering grease distributer for the girth gear	2	
RFC	Progressive Distributer	Lincoln Secondary Metering grease distributer SSV4 for the girth gear	2	
RFC	Grease distributer	Lincoln SSV4	8	
RFC	Grease Distributer	Lincoln SSV2 grease Distributer	2	
RFC	Classifier Seal Y-piece	DN200 reinforced rubber hose	2	
RFC	Lube oil cooler	Oil-watercooler P=45kW, TH2O= 34°C, 4m³/h, dp<0,2bar P10-2P- L=1500 MV15 internally coated	2	
RFC	Lubrication system NRV		2	
RFC	Lube oil system Pressure regulator		2	
RFC	Oil water cooler isolation valve		2	
RFC	Filter K7 fan assembly		2	
RFC	Radial and thrust bearings, Grease lubricated antifricition		2	
RFC	Bolt assembly		2	
681522	PINION		2	
	BEARING ASSEMBLY		2	
Needs to be DCF	Liners			

RFC* - Request for Cataloguing information

Cataloguing requirements by the *Contractor*

Cataloguing for various equipment supplied by the *Contractor* to complete the works is required. Requirements for cataloguing that need to be satisfied by the *Contractor* Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974

2. Drawings

Drawing number	Revision	Title

3. Specifications

Title	Date or revision	Tick if publicly available
<u>General Specifications:</u>		
Health and Safety requirements		
Environmental requirements		
Site regulations and access control		

4. Constraints on how the *Contractor* Provides the Works

The works required will be executed in sequence with other identified maintenance disciplines and thus an integrated plan will be required.

4.1 Meetings

Regular meetings of a general nature will be convened and chaired by the *Employer's* representative as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Project Kick-off Meeting	2 days after Contract Award	Kusile Power Station	Employer, Contractor and Others
SHEQ Requirements Clarification Meeting	2 days after Kick – off meeting	Kusile Power Station	Employer, Contractor and Others
Execution Progress Meeting	Daily	Kusile Power Station	Employer, Contractor and Others
Overall contract progress and feedback	Weekly on Thursdays	Kusile Power Station	<i>Employer and Contractor</i>
Risk register and compensation events	Daily	Kusile Power Station	Employer, Contractor and Others
Other	as and when required		<i>Employer, Contractor and Others</i>

Meetings of a specialist nature may be convened as specified elsewhere in this Scope or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *services*. Records of these meetings shall be submitted to the *Employer's* representative 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.

4.2 Use of standard forms

NEC ESCS forms to be used for contract communication.

4.3 Invoicing and payment

In terms of core clause 50 the *Contractor* assesses the amount due and applies to the *Employer* for payment. The *Contractor* applies for payment with a tax invoice addressed to the *Employer* as follows:

The *Contractor* attaches the detail assessment of the amount due to each tax invoice showing the Price for Work Done to Date for each item in the Price List for work which he has completed.

The *Contractor* includes the following information on each tax invoice:

- Name and address of the *Contractor*
- The contract number and title;
- *Contractor's* VAT registration number;
- The *Employer's* VAT registration number 4740101508;
- The total Price for Work Done to Date which the *Contractor* has completed;
- Other amounts to be paid to the *Contractor*;
- Less amounts to be paid by or retained from the *Contractor*;

- The change in the amount due since the previous payment being the invoiced amount - excluding VAT, the VAT and including VAT;

The invoice is to be submitted to **invoiceseskomlocal@eskom.co.za** once confirmed with the payment certificate.

4.4 Records of Defined Cost

In order to substantiate the Defined Cost of compensation events, the *Employer* requires the *Contractor* to keep records of amounts paid by him for people employed by the *Contractor*, Plant and Materials, work subcontracted by the *Contractor* and Equipment. [See clause 11.2(5) and 63.2]. State in what form these records are to be kept and how accessed by the *Employer*.

4.6 BBBEE and preferencing scheme

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

4.7 Facilities to be provided by the Contractor

The Contractor is to establish site for all the personnel and equipment requirements for the duration of the contract.

4.8 Title to material from excavation and demolition

N/A

4.9 Design by the Contractor

N/A.

4.10 Cataloguing requirements by the Contractor

Cataloguing for various equipment supplied by the *Contractor* to complete the works is required. Requirements for cataloguing that need to be satisfied by the *Contractor* Procurement Instruction Number 1 of 2018 – Incorporating Cataloguing into the Procurement Environment, Unique Identifier 240-1289988974

5. Requirements for the programme

A programme for the whole of the works, indicating activities ensuring the successful completion of the work is to be submitted for acceptance within 3 days after project kick-off meeting.

The *works* will be deemed successful when the mill is fully operation and the defect period adhered to, as defined in Clause 11.2(1).

6. Services and other things provided by the Employer

Describe what the *Employer* will provide such as services (including water and electricity) and “free issue” Plant and Materials and equipment.

Item	Date by which it will be provided
Dedicated area for Site establishment	
Water and Electricity	
Ablution Facilities	