

## SCOPE OF WORK

**Tender No.:** FOSCO-RFP-33-2024

**Description:** Motors Repair and Rewind Contract

### 1 INVITATION TO TENDER

This document prescribes the requirements for Motors Repair and Rewind contract for 3 years.

#### 1.1 DEFINITIONS AND ABBREVIATIONS

BOQ	–	Bill of Quantities	MHSA	–	Mine Health and Safety Act
BRA	–	Baseline Risk Assessment	NDT	–	Non-destructive Test
COC	–	Certificate of Compliance	OH&S	–	Occupational Health and Safety
COP	–	Code of Practice	OHC	–	Over-Head Crane
CTD	–	Critical task Descriptions	PEE	–	Portable Electrical Equipment
DAP	–	Diammonium Phosphate	PPE	–	Personal Protective Equipment
DB	–	Distribution Boards	QA	–	Quality Assurance
DWA	–	Department of water affairs	QC	–	Quality Control
DWG	–	Drawing	QCP	–	Quality control Plan
ECO	–	Engineering Change Order	QMS	–	Quality Management System
HDG	–	Hot-Dip galvanizing	RFI	–	Request for Inspection
HIRA	–	Hazard Identification and Risk Assessment	ROPS	–	Rollover Protection System
IFC	–	Issued for Construction	SANS	–	South African National Standards
ISO	–	International Organization of Standardization	SHE	–	Safety, Health, Environment
LDV	–	Light Delivery Vehicle	SHERQ	–	Safety Health Environment Risk & Quality
MAP	–	Monoammonium phosphate	TMMS	–	Trackless Mobile Machines
MCOP	–	Mandator Code of Practice	WBS	–	Work-breakdown structure

## **1.2 SCOPE BACKGROUND**

The Foskor mining operations in Phalaborwa depends on the service providers for the repairs and rewinding of motors when the motors being used in the plant get damaged. With the current contract coming to an end it is important for us to engage in a process to place a new contract for the smooth continuity of the business in this regard. The scope of this project therefore is for the comprehensive maintenance of motors for us to ensure adequate spare motors to be used in the plant in case of faults, damages and breakdowns.

## **1.3 COMPANY BACKGROUND**

Foskor is one of the world's largest producers of phosphate rock (concentrate) and phosphoric acid. It is one of the world's few vertically integrated producers of phosphoric acid and is the second-largest supplier to India, the world's largest consumer of phosphoric acid.

The Company owns and mines phosphate resources and beneficiates the mined material to produce a phosphate concentrate at Phalaborwa, in the Limpopo Province of South Africa. The phosphate concentrate is sold locally and transported to the Richards Bay plant on the coast of Kwa-Zulu Natal to produce phosphoric acid, sulphuric acid and granular fertilisers MAP and DAP from phosphoric acid and is the leading supplier of fertilisers to South Africa. In all about 95% of the phosphoric acid is exported and the granular sales are divided between exports and local markets. Since 1951 Foskor has supplied more than 95% of South Africa's fertiliser requirements.

## **2 SCOPE OF WORK**

### **2.1 BACKGROUND DOCUMENTATION**

N/A

### **2.2 SCOPE - EXTENT OF WORK OR SERVICE REQUIRED**

#### **2.2.1 General Scope Considerations:**

Please allow for a competent Quality Control Officer to compile and manage the contractor's quality management. In the event of quality system failures, Foskor will request the Quality Official's experience and qualifications and if this is not acceptable, it will be expected that the contractor obtains this service at its own cost.

Please allow for a competent person to compile the method statement and the subsequent Microsoft Project plan. This person will manage and update this plan weekly and present it to the Foskor Project Engineer. It is expected that this planning and management is executed by the contractor. This service will be provided at the contractor's cost. If the contractor cannot execute this planning and report to management, it will be expected that the contractor obtains this service at his/her cost.

Scaffolding needs to be arranged by the contractor. It is expected that arrangements will be communicated to Phalaborwa Scaffolding at least 3 days before the requirement. Proof of request and arrangements and actual scaffolding installation for Scaffolding to be provided to Foscok on request.

#### **2.2.2 Project costing and expenses:**

The contractor shall supply all engineering services, materials, labour, transport, supervision, and consumable materials, equipment, tools and every item of expense for the scope of work to be completed successfully unless otherwise stated taking the following into consideration.

#### **2.2.3 Scope Specific statutory and legislative requirements Legislative requirements**

The successful service provider shall ensure that all work is carried out under the following specifications and requirements.

The successful or appointed service provider shall comply with all the SANS and IEC standards as listed in the "REFERENCES" section below

#### **2.2.4 The successful or appointed service provider shall comply with the latest revisions of the following Foscok CTD's (Critical task Descriptions) (CTD's are available on request):**

- i. **All relevant CTD's**

### **2.3 SCOPE**

This specification applies to the rewind and /or repair of electric motors in use at Foscok Phalaborwa.

#### **2.3.1 SCOPE of SUPPLY**

The scope of supply includes the following:

- Disassembly of the motor for rewind or repair.
- Investigation into the cause of failure and evaluation of the necessary rewinding or repairs.
- Procurement of all parts necessary to complete the rewind and/or repair.
- The rewind and/or repair of the motor.
- Assembly and test of the rewound or repaired motor.
- Quality Assurance requirements.

#### **Definitions**

Rewind - All work performed in the removal and insertion of new electrical windings into either the stator or rotor of electric motors. This includes the manufacture of the new windings.

Repair - All work performed to repair damaged or defective motors as an alternative to complete replacement.

Insulation - Material used to cover the copper conductor wire, to isolate the terminals from the casing and to impregnate the windings. The insulation material is classified according to its ability to electrically isolate the motor conductors at different temperatures and is defined in **IEC 85**.

### 2.3.2 REFERENCES

The following is a list of mandatory standards, codes and other documents from which this specification was compiled. This document, however, is intended to be a 'stand-alone' specification.

#### International Standards

IEC 43 - 1:	Rotating Electrical machinery, Part 1 - Rating and Performance.
IEC 60034-23:	Specification for the refurbishing of electrical rotating machines.
IEC 85:	Recommendations for the Classification of Materials for the Insulation of Electrical Machinery and Apparatus in relation to their Thermal Stability in Service.
IEC 172:	Test procedures for the determination of the temperature index of enamelled winding wires.
ISO 1940 Part 1:	Mechanical vibration - Determination of permissible residual unbalance.
ISO 9001:2000	Quality Requirements
ISO 8501 -1:	Pictorial surface preparation standards for painting steel surfaces
ISO 2757:	Method for determining the thermal classification of electrical insulation.
IEEE:	IEEE Recommended practice for testing insulation 43-1974 resistance of Rotating Machinery.
VDE 0530:	Standard specification for rotating electrical machines.
ISO/R 15/1 1968:	Dimensional Standards for Deep Groove Ball Roller Bearings.
BS 848 Part 1:	Fans for General Purposes – Methods of Testing Performances.
BS 907:	Specification for wrought steels for mechanical and allied engineering purposes.
BS4999:	General requirements for rotating electrical machines.

### **South African Standards**

SANS 1804-3:	Three Phase Induction Motors.
SANS 60317-12:	Enamelled Copper Conductors.
SANS - 804:	Electrolytic tough pitch high conductivity copper.
SANS 286-1:	ISO limits and fits (specification).
SANS 1561-1:	Rewind and refurbishing of rotating electrical machines. Part 1 Low voltage three phase induction motors.
SANS 10242-1:	Rewind and refurbishing of rotating electrical machines. Part 1 Low voltage three phase induction motors.

### **2.3.3 EVALUATION OF MOTOR DAMAGE/CAUSE OF FAILURE**

#### **Damage Assessments and Repair Work Proposal**

Prior to any repair work being commenced, the extent of repair required shall be agreed and recorded.

The report must as a minimum include:

- Motor identification (serial number, type, voltage, rating, etc.)
- Functional location
- Description of physical conditions
- Visual inspection (including colour photographs)
- Detailed inspection (where applicable, including colour photographs)
- Conclusions
- Recommendations

No repair work shall be done without a written quotation.

Before and during stripping, the Contractor shall endeavour to ascertain the cause of failure and shall report his findings to Foskor in writing with his quotation. Relevant Foskor employee must be present before the stripping of the motor to witness the cause of failure.

### **2.3.4 MANUFACTURING AND REPAIR WORK (Rewinding, Winding and General Repairs)**

#### **a. Materials**

##### **Insulation**

As a minimum the insulation materials used in the construction of motor windings, slot and phase insulation and terminations shall conform to class H having the temperature index of 180° C as defined in SABS 948-1 and IEC 85.

##### **Winding Wire**

Mush winding wire shall have an enamelled coat. When evaluated as described in IEC 172 (Test Procedures for the Determination of the Temperature Index of Enamelled Winding Wires), the coating shall have a temperature rating in excess of 180 °C. The SABS standard 1181 “Enamelled copper conductors” shall be used when applicable. The copper used to manufacture wire for coils shall conform to SANS 60317. All work will include vacuum pressure impregnation (VIP). Relevant Foscok employee must be present to witness the quality of stator winding performed during rewind process, this will be a hold point in the rewind quality control plan.

#### **b. Execution**

##### **Windings**

Replacement coils shall comprise of the same number of turns, same size of wire and coil span, and be connected, supported, and insulated in the same way as the original design unless otherwise specified or agreed to by Foscok in writing.

Stator and rotor winding joints shall be brazed or welded. Squirrel cage rotors shall be repaired using a method that minimizes built - in stress. A brazing technique where bars are simultaneously brazed to the end rings is preferred and as far as possible, the end rings for squirrel cage rotors shall be forged. Relevant Foscok employee must be present to witness the quality of rotor winding performed during rewind process; this will be a hold point in the rewind quality control plan. The oven burn-out process which varies between oven temperature setting and duration of motor in the oven shall be pre-approved by Foscok before the motor rewind contract starts. Stripping of motor windings by use of cutting torch is prohibited.

##### **Stripping**

If heat is used in the process of removing the old winding, the Contractor shall ensure, to Foscok’s satisfaction that the degree of heat is not damaging to the core and frame, or to any undamaged windings that are to be salvaged. High temperature can negatively affect the motor core laminations and is therefore detrimental to motor efficiency. The oven burn-out process which varies between oven temperature setting and duration of motor in the oven shall be pre-approved by Foscok in writing before the motor rewind contract starts. Stripping of motor windings by use of cutting torch is prohibited.

Once the core has been stripped, a core flux test shall be done. (Appendix 1)

## Inspection and Measurement

Prior to the replacement of bearings, inspection and measurement readings shall be taken of the shaft, journals, housing etc., in accordance with Appendix 3.

The readings obtained shall be recorded and examined to ensure the correct "Limits and Fits".

## Bearings

The bearings shall be replaced irrespective of their condition.

SKF (first choice), NSK, FAG or Timken bearing bearings shall always be used, unless otherwise requested as per the Foskor order. The radial clearance on bearings shall be C3.

Foskor has the right to supply bearings if necessary.

The bearings stipulated on the nameplate data and the bearing removed from the motor shall only differ if the bearing on the DE is a ball bearing which must always be replaced with the NU bearing on the DE. Only the OEM recommended bearings shall be used, even the replacement NU bearing on the DE

Only the grease type recommended by the OEM shall be used for greasing motor bearings.

Motors 185kW and above must be fitted with insulated bearings on the NDE as per OEM recommendations where applicable.

## Balancing

Repaired rotors shall be statically and dynamically balanced before and after over-speed testing.

Unless requested otherwise, the Rotor is normally to be balanced to a "balance quality grade" of G6.3 as per ISO 1940, Part 1.

G6.3 for:

- Motors with a max rated speed of less than 950 rpm and a shaft height of more than 80 mm
- Motors with a shaft height of less than 80 mm

G2.5 for:

- Motors with a max rated speed of more than 950 rpm and a shaft height of more than 80 mm

The report should indicate the following:

- Rotor mass
- Service speed
- Balance quality grade used
- The initial unbalance
- Permissible residual unbalance
- Residual unbalances

All is clearly explained in ISO 1940-1. An example can also be found in Annexure 1

### **Painting requirements for motors**

The contractor shall paint the motors Electrical Orange according to SABS 1091 B26.

DC motors when required per quote will be painted white with an Electrical orange B26 ring painted around the centre of the motor.

Vertical shaft motors cowl to be painted A11 Red

All high efficiency motors must be painted RAL6002 Green

### **Replacements of parts**

The damaged parts of the motor must be replaced. The old parts need not be brought back to Foskor unless otherwise requested as per order.

The drive shaft must be coated with a protective sealer.

Damaged or cracked fan cowls or fan must be replaced.

The terminal boxes must be filled with epoxy to seal off the opening between the terminal box and stator.

The grease nipples must be replaced and must protrude 25 – 50 mm above the motor.

If the foot of the motor is cracked or broken it must be replaced and bedding must be checked.

The motor unique number plate must be checked according to the repair request form, if no number is on the motor a new plate must be made out of copper 80mm x 15mm and stamped with the motors number and fixed to the top of terminal box by means of rivets eg 2MTRA 0211.

All motors end shields NDE and DE must be sealed with a silicon compound to prevent water penetration.

Eye bolts to be painted according to Foskor COP 56 lifting tackle inspection per month (Attached herewith)

**The nameplate must be replaced and must have at least the following data:**

- The name of the Original Manufacturer
- The frame size



- Rated output in kW
- Rated voltage in volts
- The method of connection of the primary winding
- The insulation class
- IP rating
- Rated current in amperes
- The rated frequency in Hz
- The number of phases
- The speed at rated output in revolutions per minute
- The bearing sizes DE and NDE
- The motor no load current
- The motor no load power (in kW) at rated voltage

### 2.3.5 INSPECTION AND TESTS

The following tests shall be done on the repaired or rewound motor. Details of these tests are given in Appendix 1 and the test result formats in Appendix 2.

**The rewinders own test formats will be acceptable if the same information is presented:**

- dc resistance of windings
- Insulation resistance
- Air-gap Measurement
- No-load Test
- Core Flux Test
- High Voltage Test
- Visual Inspection and Measurement Checks
- Surge comparison – interturn test (Risatti)
- Full load test
- Rotor bar test

- No load losses
- Full load losses
- Efficiency
- Static and dynamic balancing of rotor test
- IP rating confirmation test
- Polarization index
- Starting time and starting current

### **2.3.6 QUALITY ASSURANCE**

#### **General**

Any inspection and testing carried out or witnessed by Foskor shall not in any way relieve the Contractor of his responsibility for achieving an acceptable rewind or repair.

#### **Material control**

The Contractor shall provide copies of insulation system type tests demonstrating that the insulation meets the requirements of this specification.

Where enamelled copper wire is used, the Contractor shall provide copies of the wire supplier's guaranteed characteristics demonstrating that the material meets the requirements of this specification.

Where copper bar is used, the Contractor shall provide a test certificate for the copper used demonstrating that the material meets the requirements of this specification.

### **2.3.7 DOCUMENTATION**

#### **Required Documentation**

On completion of the rewind or repair and testing prior to handover to Foskor the Contractor shall have supplied the following:

- A list of all materials and parts used in the rewind or repair.
- Copies of all test certificates and type tests.
- Certificate for a new shaft

- Balancing certificate
- A Certificate of Conformance stating that the completed repair or rewind conforms to the requirements of this specification.
- Warrantee indicating all inclusions and exclusions
- Repair record of the motor indicating how many time the motor has been repaired.

### 2.3.8 PACKAGING AND TRANSPORTATION

#### Requirements

The Contractor shall ensure that rewound or repaired motors shall be packaged for transportation and storage as follows:

If greater than 30 kW, to be provided with rotor locks to prevent rotor or bearing damage.

If not totally enclosed, the terminal box must be wrapped sealed to prevent moisture and dust ingress.

To be provided with a shaft protector that will protect the machined surfaces of the projecting shafts.

The vehicle must have a mat on the load body.

The motor must be tightly secured while in transit.

The transport costs are for the repair company.

All the documentation of repairs must accompany the motor on delivery.

Any additional Foskor packaging requirements will accompany the order.

### 2.3.9 PERFORMANCE MEASURES AND REPORTING

#### Contractors Key Performance Indicators (KPI's)

The performance of the contractor will be measured on the monthly basis. The areas of measurement will include the following:

- Mean time to repair or turnaround time
- Rework required
- Motor breakdown rate after repairs
- Efficiency
- Warrantee repairs in progress/closed out

The contractor, together with Foskor representative will at the commencement of the contract agree on categories of KPI and targets when signing the service level agreement (SLA)

### **Monthly reporting**

The contractor will issue a monthly report to Foskor, the following minimum information must be contained in the report:

- Repairs or rewind undertaken on normal time basis
- Repairs or rewind undertaken on breakdown basis
- Key Performance Indicators (KPI's)

The monthly reports will form the basis for quarterly review meetings and the contractor will include any other items on monthly report that may be of interest to Foskor.

### **2.3.10 VIBRATION MONITORING MOTOR ACCEPTANCE CRITERIA**

#### **Spectrum Plot**

- a) Velocity RMS Overall value not more than 2.5mm/s
- b) Acceleration RMS Overall value not more than 0.300g's
- c) Spectral peaks should not have more than 4X RPM frequency harmonics at almost same amplitude.
- d) 1-4 XRPM frequency should not be more than 2,00 mm/s peak amplitude.
- e) Bearing frequencies should not show at all in the spectrum.
- f) No multiple electrical frequencies on Velocity spectrum.

#### **Time Wave Plot**

- g) No repetitive impacting exceeding 2.50 g's peak-peak
- h) No random impacting pattern exceeding 2,50g's peak-peak

#### **Temperature**

- i) Bearing temperature should not be exceeding ambient temperature by 35°C

### **3 PROJECT URGENCY**

Project urgency is defined below:

Not applicable

### **4 DELIVERY OF MATERIALS AND EQUIPMENT**

It is the responsibility of the Contractor to take delivery, off-load, store and move into their permanent position all equipment and materials covered under this Scope. The Contractor shall, at his own expense, be responsible for the delivery to the Site of imported plant and equipment, materials and Contractor's plant and equipment in connection with the execution of the works, including but not limited to securing of permits and customs clearances, and payment of handling costs, storage costs, releasing costs, transportation costs, and duties, taxes, imposts, excise and charges of any kind that may be imposed by the South African Government, or any of its agencies and political subdivisions relating to the supply and delivery to the site of the imported plant and equipment, materials and Contractor's plant and equipment.

TAKE NOTE - Foskor pays for material delivered to Foskor site only!

NB: The contractor/ consultant must clearly state in his tender submission if there is an exclusion on the Foskor scope (As per the site meeting procurement scope and site meeting minutes) Failure to state the exclusion will mean that the full Foskor scope is still applicable.

Lay down areas are as indicated on the drawings

## 5 **BATTERY LIMITS – INCLUSIONS AND EXCLUSIONS**

None

## 5.1 TABLE OF INCLUSIONS AND EXCLUSIONS

List the boundaries in terms of equipment (Foskor plant specific). Up to where is it Foskor's responsibility and where/what is the contractor's responsibility.

WHO WILL SUPPLY THE FOLLOWING?													
FF = FOSKOR, FREE OF CHARGE				FC = FOSKOR, AT COST TO CONTRACTOR				C = CONTRACTOR				N/A = NOT APPLICABLE	
1. Sanitary		2. Transport		3. Quality		4. Security		5. Lifting and Rigging		6. Medicals		7. Communication devices	
1.1 Water on site and toilet facilities / janitorial services	N/A	2.1 Labour	C	3.1 Plan, Management, QA, QC	C	4.1 Site Security	C	5.1 All rigging equipment (Slings, Chain blocks, turfers, etc)	C	8.1 Entry and Exit	FF	7.1 All communication devices like laptops, computers, networks, radios, cellphones, etc	N/A
1.2 Potable connection point	N/A	2.2 Materials	C	3.2 All quality test Civil, Paint, Mechanical, etc	C	4.2 Foskor ID Card	FF	5.2 Rigger	FF	8.2 First aid box at place of work	C		
1.3 Connection to construction water supply	N/A	2.3 Equipment	C	3.3 Sampling and laboratory testing	C			5.3 Mobile cranes	FF				
1.4 Change rooms	N/A	2.4 All TMMS	C										
8. PPE		9. Surveying		10. Safety File		11. Training & Authorizations		12. Site Establishment		13. Waste management		14. Painting	
8.1 Supply, Issue, inspect and manage	C	9.1 Site Surveys	N/A	10.1 Foskor will issue template	FF	11.1 All Required Training	C	13.1 Site office/s with suitable facilities for daily "Green Area" meetings, and lunch area	N/A	13.1 Transport all on site to waste to Foskor designated waste sites	N/A	14.1 All Equipment and tools paint, labour, etc	C
				10.2 Ensure file conform/ populate to Foskor standards	C	11.2 Authorisation - As per Foskor COP	FF	13.2 Site establishment space	FF				
15. Fuel		16. Mechanical		17. Labour		18. Compressed air		19. Scaffolding		20. Tools & Equipment		21. Training	
15.1 Fuel Supply	C	16.1 Conveyor Belt	N/A	17.1 All labour as per Scope of Work to execute task including management	C	18.1 Sandblasting or flash blast	N/A	19.1 Scaffolding Supply & Erect	N/A	20.1 All Portable Electrical Equipment	N/A	21.1 All required training and training manuals as required to ensure that Foskor can train its workforce and operate the plant / equipment safely	C
15.2 Fuel storage	N/A	16.2 Conveyor 59 Drive Gearbox	N/A			18.2 Compressor	N/A	19.2 Scaffolds be managed by the Contractor	N/A	20.2 Hot Work Equip as per Foskor COP - Welding Machines, Gas Cutting, Grinding, Gauging, etc	N/A		
15.3 Fuel fire protection	N/A	16.3 Idlers, Rollers and Frames	N/A			18.3 Air for power tools - If available	N/A	19.3 Cherry Picker's – only if and when available by pre-booking	F	20.3 Tools as required to execute task	C	21.2 All manuals and related documents to be supplied to project Eng. and Foskor Drawing office for safe keeping	N/A
15.4 Refuelling	C							19.4 Cherry Picker's Driver– Trained and authorized driver	C				
22. Certificates		23. Consumables		24. Storage and inventory control		25. Electrical							
22.1 Supply All certificates as required	C	23.1 Welding rods	N/A	24.1 Protective coverings/tarpaulins	N/A	25.1 Generators	N/A	25.4 Temporary lighting	C	25.7 Electric panel + distributing wiring	N/A		
		23.2 Bolts & Nuts, etc.	N	24.2 Storage area and inventory control	C	25.2 Electrical Extensions	N/A	25.5 Power for tools on site from existing Foskor electrical supply point (Welding plugs and 220 v plugs)	N/A	25.5 Electrical connection point	N/A		
						25.3 COC Site Establishment	C	25.6 Connection to Electrical supply	N/A	25.9 Electrical and Instrumentation Installation	N/A		

**\*\*NOTE**

Foskor has made provision for the supply scaffolding free of charge the size and nature of the works. It is expected that arrangements will be communicated to the appointed Scaffolding contractor at least 3 days before requirement. Proof of request and arrangements and actual scaffolding installation for Scaffolding to be provided to Foskor on request

It should be noted that FOSKOR has an existing appointed and accredited scaffolding supplier who could be sub-consulted and provide part of the local company requirement of the contract.

## **5.2 ADDITIONAL BOUNDARIES**

**None**

## **6 AS BUILT DRAWINGS**

**Not applicable**

## **7 QUALITY**

- i. The service provider must provide the necessary quality management systems and plans to ensure that the quality of his work complies with the requirements of this scope of work
- ii. The service provider shall during all phases of construction comply with the Foskor approved Quality Assurance Plan
- iii. The service provider shall be responsible for all the resources required for executing the Quality Management System including but not limited to, developing the Quality Assurance Plan & performing the Quality Control measures to ensure that the deliverables comply with the specifications & standards mentioned in the scope of work
- iv. Any change requests / additional work resulting due to inadequate quality management system will be to the account of the service provider
- v. Foskor might appoint a third party for Quality Control Inspections
- vi. The Service provider will have to provide an approved quality system for all work executed.
- vii. This will include the following but is not limited to:
  - a. Quality plan
  - b. Quality compliance – Performance and reports
  - c. Quantity surveying
  - d. Quality Assurance
  - e. Quality Authorization matrix – part of the Quality plan
  - f. Quality control
  - g. Quality administration. – All documents, checks, measurements, reports, variances, analysis, Corrective actions, etc. needs to be properly filed and available on request at any time. The file will require an index

- h. Includes all test work, laboratories, Filing, etc.
  - i. Survey and survey verifications
  - j. Construction versus design - Any Deviations from the approved "Construction Drawings"
  - k. Quality communication – What needs to be reported to whom and at what frequency
- viii. Foscok envisage a complete quality System driven by the Service provider and this system/plan will be approved by Foscok and the appointed designer (if applicable) before construction/fabrication will be started.
- ix. Compliance to this plan will be measured and failure to adhere to the quality plan will result in the stopping of construction activities until concerns have been addressed. The cost for this delay will be for the service providers account.
- x. Foscok may appoint a third party to measure and control Foscok's interest in the terms of quality in this contract and the service provider is expected to work in conjunction with this company
- xi. Hold points will be discussed and finalized with the successful service provider based on the approved Quality plan

The Quality plan will only be compiled and signed off after the Method Statement and WBS\* have been compiled.

Quality on Shutdown type tasks will be included in the Scope of Works but the service provider will have to submit proof of an experienced quality assurer or relevant qualifications. IF the service provider does not have this it will be required that this service be hired in by the service provider at his cost.

- i. State any specific hold points that are not negotiable here
- ii. State any other applicable quality that is not in the "Parameters" section

Method statement – the service provider must list all steps and actions required to complete the work as per the scope of work – typically includes the items listed below:

- i. Key step and stages of the work required
- ii. Tools, Equipment, TMMS, etc
- iii. Labour requirements, etc
- iv. Spares, resources,
- v. Safety requirements

**\*WBS** is a hierarchical and incremental decomposition of the project into phases, deliverables and work packages. It is a tree structure, which shows a subdivision of effort required to achieve an objective; for example, a program, project, and contract.



This includes arrangements, tools, equipment labour, Tasks, Purchase, Quality, Communication, etc

## 7.1 QUALITY FILE INDEX

The quality file index listed below will be the minimum requirement.

This file must be kept up to date for the duration of the project and will be handed to the Foskor project Engineer on completion of the project

### 7.1.1 QUALITY FILE INDEX

	<b>QUALITY FILE INDEX</b> FOSKOR: TSS - PROJECTS	Doc. No.:	FSK-P-GEN-IX-001
		Rev. No.:	00
		Date:	12 - July - 2019

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## 7.2 ADDITIONAL QUALITY REQUIREMENTS

No additional requirements

## 8 PROJECT DELIVERABLES

### 8.1 THE DELIVERABLES FOR THIS PROJECT INCLUDE:

Not applicable

### 8.2 DATA BOOKS

Not applicable

### 8.3 MANUALS AND DOCUMENTATION

The following must be supplied:

- None

### 8.4 FORMAT OF DOCUMENTS AND MANUALS

Note! - All Manuals must be in English

### 8.5 TRANSMITTAL OF DOCUMENTS AND MANUALS

Documents and Manuals to be submitted in the flowing formats:

Type of Document	Hard Copy	Electronic Format
Manuals	X	X
Drawings	X	X
Reports	X	X
Data Books	X	X

Hard Copy: Book or binding arch file format and must be durable and of high quality.

Soft Copy: Manuals, Reports and Data Books – Word, Excel, PDF, etc.

Storage – Compact Disk or Data traveller

Language: English

### 8.6 PROJECT COMPLETION

Not applicable

## 9 DOCUMENTS / DRAWINGS ISSUED BY FOSKOR

Drawing or Document No	Title	Revision
	Motors Repair and Rewind Contract _ SOW	
	Motors Repair and Rewind Contract _ Appendices	
	Motors Repair and Rewind Contract _ Pricing Schedules	
	Motors Repair and Rewind Contract _ Technical Evaluation Annexures	
<b>Note</b>	Please read your Scope of Work	

## 10 ON-SITE SUPERVISION REQUIREMENT

- A Foskor work permit before commencement of site work.
- A full time 2.9.2 appointed supervisor will be on this site for the entire duration of site work
- A 2.6.1 appointed site manager for overall site management
- Appointed SHE Rep for the entire duration of site work

### 10.1 ADDITIONAL REQUIREMENTS

None

## 11 TENDER DELIVERABLES

The deliverables will include: -

- The completed Motors Repair and Rewind Contract \_Pricing Schedules
- The requested Motors Repair and Rewind Contract \_Technical Evaluation Annexures
- Tax Clearance
- Letter of Good standing (Workman compensation)
- BEE Certificate
- Commercial documents requested by Procurement

Not submitting the required documentation or not completing the documentation (Pricing Schedule) correctly will lead to a disregard of the tender.

Take note of the tender evaluation documents that need to be submitted

## 12 SAFETY

Service provider to refer to the full and updated Foskop COP's available:

- i. The service provider and sub-service providers need to always comply with the Mine Health and Safety act. All Foskop COP's Policies and procedures need to be adhered to.
- ii. A service provider 2.9.2 to be permanently on-site.
- iii. Medical, Induction, Foskop ID Card, etc. is approximately R800 per person. Exit medicals need to be done at the termination of the contract.
- iv. The Successful tenderer will be required to compile a Foskop Work permit and at least 2 weeks should be allocated for this. The service provider must provide the following appointed persons in terms of the MHSA: 2.6.1; 2.9.2 and Section 29(1) – SHE REP for the duration of the contract
- v. All vehicles and cranes and other TMM's to be inspected before entering Foskop Premises.
- vi. All person competencies to be verified before being allowed to work on Foskop premises for a specific task.
- vii. The service provider must compile a Safety File as per Foskop standard for all service providers and sub-service providers
- viii. Site access will need to be controlled and all persons must receive site-specific induction before entering the site.
- ix. Conduct inspections as per Foskop Safety System. Analyse data and trends and recommend preventative measures where required
- x. Ensure all authorizations are in place as per the Foskop Safety System. Arrangement with Foskop training to be done by the service provider to ensure that authorization and training are conducted. Arrange timeously.
- xi. Ensure all workers competencies are available and have been validated.
- xii. Ensure proper security, signboards, fencing and barricading is in place on-site where applicable
- xiii. The service provider shall in general comply with the FOSKOR General Engineering Specifications, COP's, latest revisions and all relevant regulations
- xiv. The service provider must complete a Baseline Risk Assessment (COP 01) before a work permit can be issued for the installation.
- xv. All service providers not in possession of a valid Foskop ID card have to complete the Foskop induction course and have to undergo a medical examination at the Foskop clinic for the service provider's account
- xvi. The service provider shall be responsible for coordinating and integrating his schedule and responsibilities with other FOSKOR appointed contract manager on-site for this Scope of Work.
- xvii. All personnel operating mobile equipment including LDV's must have a Foskop driver's permit.
- xviii. An open Pit Licence is required for driving in the mining area's

- xix. All the required PPE and Safety Equipment are for the service provider's account.
- xx. All service providers must ensure that:
  - a. His workers are issued with the correct personal protective equipment free of charge.
  - b. That the workers wear the PPE per the project area's requirements or as given by the service provider Supervisor.
  - c. Training is provided in the correct use of PPE to workers.
  - d. Daily inspections are done on PPE.
  - e. The registers will be complete at least monthly on findings on PPE. (All PPE must be kept in good condition)
- xxi. All providers of services need to be informed of the following minimum training applies to all service providers (irrespective of the tasks or scope of work) that will enter the Foskor Phalaborwa site with effect from 1 April 2014. This training is not presented by the Foskor Training section and service providers must ensure that the training is sourced through accredited external training companies:
  - a. Basic health and safety principles
  - b. HIRA
  - c. First Aid Training
- xxii. All other training requirements must be aligned with the baseline risk assessment. Risks identified in the baseline risk assessment will guide the requirements for training. A summary of the training must be completed as well as status on required authorization as per Foskor COP's.
- xxiii. Training certificates will be accepted if complying with the following:
  - a. Unit Standard Title
  - b. Learner Full name
  - c. Learner ID number
  - d. Competency achieved
  - e. Date of Assessment
  - f. Assessors signature
  - g. Training provider logo
  - h. Training provider registration number and accreditation number.
  - i. Seta logo

## **13 LEGISLATIVE REQUIREMENTS – SUMMARY**

### **13.1 MINIMUM LEGISLATIVE REQUIREMENTS:**

The successful or appointed service provider shall comply with:

- i. The Mines Health and Safety Act with Regulations (Latest revision)
- ii. The National Road Traffic Act with Regulations (Latest revision)
- iii. All applicable national and international legislative requirements and regulations.
- iv. Foskor (Pty) Ltd. COP (Code of Practise) No. 25 for Service Provider Control (Available on request)
- v. Foskor (Pty) Ltd. COP (Code of Practise) No. 59 for Trackless Mobile Machinery (Available on request)
- vi. All Foskor (Pty) Ltd. safety, health, quality and environmental procedures applicable to the successful application of the contract. (Available on request)
- vii. All Foskor procedures and policies apply to the successful application of the contract. (Available on request)

### **13.2 SUMMARISED REQUIREMENTS/EXTRACTS FROM FOSKOR COP'S**

#### **13.2.1 Before entering and operating a service vehicle (Own vehicle) on the Foskor site, the appointed service provider shall:**

- i. Ensure that his driver/s have a valid national driver's licence for the specific class of vehicle, has been tested by the Foskor mobile equipment training centre and authorised by a Foskor MHSA (Mines Health and Safety Act) regulation 2.13.1 appointee for the class of vehicle to be used on site.  
  
(Contact the Foskor mobile equipment training centre on 015 789 2840 to make an appointment for competence testing and authorisations)
- ii. The appointed service provider shall, before entering and operating a vehicle or trailer on the Foskor premises:
  - a. Obtain permission from the Foskor Safety & Security manager to operate his nominated service vehicle/s or trailers on the Foskor site. (Forms will be provided)
  - b. Obtain a certificate of fitness from the Foskor Light Vehicle maintenance workshop supervisor or appointed a Foskor inspector for his nominated service vehicle/s. Inspections conducted daily between 08:00 and 08:30 and between 13:30 and 14:00 (Excl. Fridays) at the Light Vehicle Maintenance workshop.
  - c. Submit the above permission and COF at the main security office for the issue of a vehicle access disk.
- iii. Ensure that his service vehicles/trailers have been inspected (Daily) by the Foskor standard (COP 59) to ensure that they are safe and fit for use. (Forms will be provided)

See Foskor COP 59, Trackless Mobile Machinery for details.

**13.2.2 Before entering and working on the Foskor site the appointed service provider shall ensure that his workmen are:**

- i. Briefed on the required task and have been informed of any abnormal conditions/situations.
- ii. Physically, emotionally, and mentally fit to perform their duty.
- iii. Issued with the necessary PPE (Personal Protective Equipment) to safely operate his service vehicles and perform the duty of maintaining, servicing, inspecting, and testing earthmoving- and mobile equipment.
- iv. Before commencement of work:
  - a. All tools and equipment shall have been inspected and tested to be in good and safe working order.
  - b. All workmen have participated in the completion of a standard Foskor site risk assessment (Commonly known as a HIRA or Hazard Identification and Risk Assessment) and taken appropriate actions to mitigate any identified hazards.

**13.2.3 Before entering and working on the Foskor site the appointed service provider shall:**

- i. Ensure that his portable electrical equipment has been tested and declared safe to use by the Foskor electrical services workshop.

**14 PERMIT TO WORK**

Before any on-site work under this contract may commence, the appointed or successful service provider shall obtain from Foskor a PERMIT TO WORK. The following guidelines are provided to assist the appointed service provider in obtaining a PERMIT TO WORK. (See Foskor COP 28 Permit to work and COP 25 Control of Externally Provided Processes, Products and Services (Service provider Control) for details):

- i. The PERMIT TO WORK can be obtained from- and on completion returned to the Legal Administrator, Foskor Safety department.
- ii. Obtain a contract number from the Foskor procurement or projects department.
- iii. Appoint a subordinate manager under Regulation 2.6.1 and an on-site supervisor under Regulation 2.9.2 of the Mines Health and Safety Act.

The appointed subordinate manager and -supervisor shall be required to write and pass the Foskor 2.6.1 and 2.9.2 legal examinations within 30 days after being awarded this contract.

Attend an hour-long legal exam briefing any Thursday between 08:00 and 09:00 at the Security training hall.

Write legal examination any Friday between 07:30 and 10:30 at the Security training hall. (Please book)

- iv. Appoint an on-site SHE-Rep under section 29(1) of the MHSA to assist Regulation 2.6.1 and 2.9.2 in the daily on-site management of health, safety and environmental issues.

The designated SHE Rep must have the ability to read, write and express him/herself.

The appointed SHE-Rep shall be required to attend a five-day SHE-Rep training course within 30 days after being awarded this contract (Training free of charge). Make booking on 015 789 2531

A pre-requisite for attending the SHE-Rep training course is successful completion of Basic Health & Safety Principals- and HIRA training.

See Foskop's COP 5 Health and Safety Representatives for details.

- v. Provide a name list, including ID numbers, residential and postal addresses and telephone numbers of all of the appointed service providers on-site employees.
- vi. All the appointed service providers on-site employees shall undergo a full medical examination at the Foskop on-site CLINIX Clinic. The clinic can be contacted at 015 789 2427 for an appointment. Please note:  
  
All NEW- and employees LEAVING the service of the appointed service provider must undergo a full entry or exit medical examination  
  
Women who are pregnant or suspect that they may be pregnant must notify the examining medical practitioner.
- vii. The appointed service providers designated on-site drivers shall receive competence testing and authorisation to operate vehicles on the Foskop site
- viii. All the appointed service providers' employees shall receive/have received training in:
  - a. First aid level 1 (Provide own training)
  - b. Working at heights (Provide own training)
  - c. Basic Health & Safety Principals (Provide own training)
  - d. HIRA (Provide own training)
  - e. Basic firefighting. (Provide own- or receive Foskop training, contact 015 789 2531 to book)
  - f. Lockout. (Provide own- or receive Foskop training, contact 015 789 2531 to book)

All training not provided by Foskop must be verified by the Foskop training superintendent Mr Johan Fouche. Please contact him on 015 7789 2525 to make an appointment or email proof of training and certificates to [johanfo@foskor.co.za](mailto:johanfo@foskor.co.za) to confirm compliance before requesting his approval on the PERMIT TO WORK.

- ix. All the appointed service providers' on-site employees shall receive the basic Foskop site induction training at the Foskop Security office.
- x. All the appointed service providers' on-site employees shall receive site-specific induction training provided by the Foskop area Regulation 2.6.1 appointee/s.
- xi. A BRA (Baseline Risk Assessment) shall be completed for ALL "typical" tasks that will be completed under this contract. The BRA to be approved by the responsible Foskop MHSA 2.13.1 appointee and signed by all of the service providers employees. Make use of Foskop's BRA document, Annexure 1.2, contained in COP 1, Risk and Opportunities Management (Available on request)



- xii. Attach a detailed SCOPE OF WORK describing the required task and -outcome of this contract.
- xiii. All Foskor's appointed MHSA Regulation 2.9.2, 2.6.1, 2.13.1 and 3.1. a manager must undersign/approve the PERMIT TO WORK.
- xiv. Registration and proof of payment under the Compensation for Occupational Injuries and Diseases Act, no. 130 of 1993. The registration number must be provided.
- xv. SARS issued a tax clearance certificate.
- xvi. All relevant documentation and/or evidence of compliance must be attached to the PERMIT TO WORK.
- xvii. Upon successful completion and approval of the PERMIT TO WORK the security department will issue the appointed service providers' employees with access ID cards.
- xviii. Any other documents, certificates or records as requested by a Foskor official deemed necessary to ensure that all safety, legislative and administrative requirements have been met must be attached to the PERMIT TO WORK.
- xix. The appointed service provider must allow at least three to ten working days to complete all the PERMIT TO WORK requirements.

## 15 **SAFETY FILE**

The appointed contractor must compile a SAFETY FILE specifically for this contract. The SAFETY FILE must always be available for inspection by a Foskor official: The following guidelines are provided to assist the appointed contractor in compiling a SAFETY FILE:

Before any work may commence, the appointed service provider must IN CONJUNCTION WITH THE FOSKOR SAFETY DEPARTMENT, compile a SAFETY FILE specifically for THIS contract. (Contact the area responsible safety representative, Mr Mahlatse Malesa at 015 789 2199 / mahlatsem@foskor.co.za or attend the monthly service providers meeting every 2nd Monday of the month (3rd Monday if 1st or 2nd Monday a public holiday) at 13:30 in the Foskor Plant Training hall)

The SAFETY FILE must always be available for inspection by a Foskor official.

### 15.1 **FOSKOR SAFETY FILE INDEX - TYPICAL**

#### **Template SHE FILE INDEX: - TYPICAL**

<u>ISO clause / Description of item</u>	<u>File divider</u>
1. Integrated Management System; Clause 5.1 & 5.2	1
2. Policies Clause 5.2: OH&S Policies	2
3. COP 1: Foskor risk management	

Clause 6.1.2.1 & 6.1.2.2: Hazard identification, risk assessment and determining controls.	3
4. COP 88: Objectives, targets and management programmes Clause 6.2: Objectives and programs	4
5. COP 2: Compliance obligations and appointments COP 5: Health and safety representatives, Clause 5.3: Legal and other requirements Clause 5.3 / 7.1: Resources, roles, responsibility, accountability and authority Clause 6.1.3: compliance obligations/ legal and other requirements	5
6. COP 15: SHERQ Competency and awareness training Clause 7.2 / 7.3: Competence, training and awareness	6
7. COP 17: Mobile, technical and process training Clause 7.2 / 7.3: Competence, training and awareness	7
8. COP 6: SHERQ Committees COP 7: Communication Clause 7.4: Communication, participation and consultation	8
9. OCCUPATIONAL HYGIENE COP 42: Lighting: natural and artificial; COP 43: MCOP Occupational health programme on thermal stress COP 44: Sanitation plant hygiene amenities COP 45: MCOP occupational health program on personal Exposure to Air borne Pollutants COP 64: Ergonomics COP 86: MCOP for Occupation Health Program for noise Clause 8.1.2 Eliminating hazards and reducing OH&S risks	9
10. COP 49: Waste management COP 58: Hazardous chemical substances and control Hazchem and waste management Clause 8.1.2 Eliminating hazards and reducing OH&S risks	10
11. COP 53: Lock out system and usage Clause 8.1.1 General Clause 8.1.2 Eliminating hazards and reducing OH&S risks	11
12. COP 55: Stairs walkways handrails and Ladders Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	12
13. COP 56: Lifting machinery and lifting Tackle Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	13

14. COP 57: Boilers and vessels under pressure work forms Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	14
15. COP 59: MCOP for the operation of TMM's Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	15
16. COP 60: Portable electrical equipment checks and registers Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	16
17. COP 61: Earth leakage Relays and checks Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	17
18. COP 62: General Electric installations and machinery in hazardous locations Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	18
19. COP 63: Hand tools Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	19
20. COP 65: Personal Protective Equipment COP 67: MCOP Women in mining PPE Clause 8.1 Operational planning and control Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	20
21. COP 69: Maintenance of fire equipment; Clause 8.1 Emergency preparedness and response, Clause 8.1.2 Eliminating hazards and reducing OH&S	21
22. COP 72: Firefighting emergency drill and instructions COP 74 Emergency preparedness and response Clause 8.1 Operational planning and control, Clause 8.2 Emergency Preparedness and response	22
23. COP 93: MCOP for the safe use of conveyors installation for the transportation of minerals, material or personnel Clause 8.1 Operational planning and control, Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	23
24. COP 94: Hot work Clause 8.1 Operational planning and control,	

Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	24
25. COP 95: Confined space entry	
Clause 8.1 Operational planning and control,	
Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	25
26. COP 96: Working on Heights	
Clause 8.1 Operational planning and control	
Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	26
27. COP 97: Erection and use of scaffolding	
Clause 8.1 Operational planning and control,	
Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	27
28. COP 98: Water safety	
Clause 8.1 Operational planning and control,	
Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	28
29. COP 101: MCOP: The right to refuse dangerous work and withdraw from dangerous workplace.	
Clause 8.1 Operational planning and control	
Clause 6.1: Actions to address risks and opportunities/Hazard identification, risk assessment and determining controls.	
Clause 8.1.2 Eliminating hazards and reducing OH&S Risk	29
30. COP 102: MCOP: Risk based emergency care on mine	
Clause 8.1 Operational planning and control	
Clause 8.2 Emergency preparedness and response	30
31. COP 103: Use of mobile devices on the mine premises	
Clause 6.1: Actions to address risks and opportunities/Hazard identification, risk assessment and determining controls.	
Clause 8.1 Operational planning and control	
Clause 8.2 Emergency preparedness and response	31
32. COP 22: SHEQ Inspection	
Clause 8.1 Operational planning and control	
Clause 8.2 Emergency preparedness and response	32
33. COP 23: Internal and external audit.	
Clause 9.2 Internal audit	
Clause 9.2.1 general and 9.2.2 internal audit programme.	33

**Notes:**

1. If a COP is not applicable to your section, please complete and attach the “Not Applicable” form in the space of the COP.
2. Always keep your file neat and clean
3. A Foskor representative may add or remove any other Foskor safety, health, quality and environmental policies and/or procedures deemed applicable.
4. If a COP is not applicable to this contract/project, please complete and attach the “Not applicable” form in the space of the COP

**15.2 TYPICAL CONTENTS OF SAFETY FILE:**

- i. Title and index cover page
- ii. A copy of the PERMIT TO WORK.
- iii. A copy of the MHSA Regulation 2.6.1 and -2.9.2 and SHE Rep appointment letters.
- iv. A copy of Foskor COP 25, Service provider control.
- v. Base line risk assessment of ALL and ANY POTENTIAL tasks that may be performed on site under this contract. See Foskor COP 26, Critical Task Descriptions for details.
- vi. Copies of critical task descriptions and standard operating/maintenance procedures.
- vii. Copies of the appointed service providers safety, health, environmental, HIV and AIDS, smoking and waste management policies.
- viii. Training records of all on-site employees.
- ix. Employee records of actual time worked (Normal and overtime).
- x. Copy of on-site induction training.
- xi. Records of inspections of TMM (Trackless Mobile Machinery) and trailers. See Foskor COP 59, Trackless Mobile Machinery for details.
- xii. Records of issues and inspections of PPE (Personal Protective Equipment) and safety equipment. See Foskor COP 65, Personal Protection Equipment for details.
- xiii. Records of issues and inspections of PEE (Portable Electrical Equipment). See Foskor COP 60, Portable electrical Equipment for details.
- xiv. Records of issues and inspections of tools and equipment. See Foskor COP 63, hand tools for details
- xv. Records of daily, weekly and monthly 2.6.1 / SHE Rep safety inspections. See Foskor COP 22, SHE Inspections for details.
- xvi. Records of daily green-area and safety talks. See Foskor COP 7, Communication for details.
- xvii. Any other documents, certificates or records as requested by a Foskor official deemed necessary to ensure that all safety, legislative and administrative requirements have been met.

**Note:**

**The bidder / Service provider can obtain updated Foskor COP's and Engineering Specification on request**

### 15.3 COP 25 – CONTRACTORS LEGAL OBLIGATION AND MINIMUM REQUIREMENTS

Contractor must comply to the requirements below within 4 weeks from awarding the contract unless otherwise agreed with 3.1 a and SHE Manager within 10 days from the awarding of such contract

	Visitors	Short Term Contractors (1-5 days)	Medium Term Contractors (1 days -1 month) – low risk	Long Term Contractors (>1 month) – low risk work	Medium or Term Contractors (1 days up to 12 month) – Risk work
Definition	Consultations, Salespersons, Foskor arranged and organised visitor groups, Family of injured employees	Deliveries, Consultation, Specialist, Auditors for less than 5 days and do not exceed 4 visits per year	Contractors working on the Mine premises for period more than 6 day but less than 1 month.	Duration of work is longer than 1 month	Duration of work is irrelevant (only focus on Risk exposure)
Special conditions	May perform no work on site	May perform no physical work on site that will involve tools, equipment, or machinery.	No work that relates to life saving rules e.g. Construction, Conveyors, Lifting, Electrical, Lock-out, Working at Heights, Hot work. Specialist and consultants (experts) working in teams smaller than 5 for less than 1 month on site.	No construction work or work that relates to life saving rules e.g. Conveyors, Lifting or Rigging, Electrical maintenance, Lock-out, Hot work, confined spaces, use of TMM's, Working at heights	This include all work relating to relates to <u>life saving rules</u> (risk work) and therefore must comply to relevant training and Authorisations as required in the Foskor COP's before work can start and permits signed.
Supervision	The organiser is responsible for the group. The visitors <u>must</u> be accompanied by a Foskor Regulation 2.9.2, Regulation 2.6.1, or legally appointed person.	Direct supervision of Foskor appointed Regulation 2.9.2. and Regulation 2.6.1	Direct supervision of Foskor appointed Regulation 2.9.2. and Regulation 2.6.1 appointed manager may be provided if contractor is unable to supply.	Must provide dedicated Regulation 2.9.2. with proof of competency and direct supervisor. Regulation 2.6.1 appointed manager may be provided if contractor is unable to supply.	Must provide <u>dedicated</u> Regulation 2.6.1. and Regulation 2.9.2. appointees with proof of competency. The Regulation 2.9.2 appointee must have technical competency and experience in line with scope and trained in the in all aspects as defined in Baseline risk.
Medical Surveillance	Only completed a declaration of fitness and health matters relevant to visit	Shortened medical surveillance Must declare Pregnancy and all chronic medical conditions at Mine Clinic	Full Medical Surveillance as per COP Must declare Pregnancy and all chronic medical conditions at Mine Clinic	Full Medical Surveillance as per COP Must declare Pregnancy and all chronic medical conditions at Mine Clinic	Full Medical Surveillance as per COP Must declare Pregnancy and all chronic medical conditions at Mine Clinic
Permit required	Day Permit is obtained at Security (Valid for 1 day)	Short term ID card at Security Return permit to Security when completed. (Permit each day)	Short term ID card at Security Permit to work at Foskor is required unless Specialists or Product experts. Return Permit to Security when work is complete	Permit to work at Foskor Permanent ID at security Return Permit to Security when work is complete	Permit to work at Foskor Permanent ID at security Return Permit to Security when work is complete
Induction	SHERQ Induction pamphlet only	Attend full Foskor Induction Site Specific Induction SHE Induction Pamphlet	Attend full Foskor Induction Site Specific Induction SHE Induction Pamphlet	Attend full Foskor Induction Site Specific Induction SHE Induction Pamphlet	Attend full Foskor Induction Site Specific Induction SHE Induction Pamphlet
Minimum training	None	None	First Aid Training HIRA Understanding Basic Health and Safety Principles	First Aid Training HIRA Understanding Basic Health and Safety Principles <u>PLUS</u> , all training as defined in Baseline risk assessment and Scope (COP 1)	First Aid Training HIRA Understanding Basic Health & Safety <u>PLUS</u> , all training as defined in Baseline risk assessment and Scope (COP 1). When construction or maintenance work is done – minimum 1 artisan per team.
Letter of Good standing	Not required	Not required	<u>May</u> be required (dependant on scope) and correct nature of business must reflect on the Letter of Good standing	Required and correct nature of business must reflect on the Letter of Good standing	Required and correct nature of business must reflect on the Letter of Good standing

#### 15.4 REMINDER OF RISK IDENTIFICATION – LIFE SAVING RULES

- *Risk Assessments and clearance certificates*
- *Lifting operations*
- *Working at heights*
- *Confined space entry*
- *Positive energy Isolation and lockout*
- *Moving Machinery*
- *Personal protective equipment*

Risk assessment is applicable to all jobs and training apply to all that will do physical work!

#### 15.5 ADDITIONAL SAFETY REQUIREMENTS

- **None**

### 16 PARAMETERS

#### 16.1 DESIGN PARAMETERS

All plant and equipment will be designed to:

- Operate satisfactorily under atmospheric, ambient, and other conditions present at the site location
- Ensure interchangeability of units and/or sub-parts throughout the plant to reduce spares holding requirements – take old plant equipment into account
- Ensure reliability and maintainability. Minimum availability of 98% is required
- Operate without undue vibration, stresses (temperature and built-in) and excessive noise
- Comply with legal requirements in terms of the water license and DWA

#### 16.2 SPECIFICATIONS, CODES, STANDARDS AND REGULATIONS

The Latest edition of the South African National Standards in effects at the date of projects design shall establish the minimum requirements for design, materials, and construction. This should be referenced with the Foskor General Engineering specifications and requirements of the Foskor SHERQ system (COP's)

No work shall be contemplated which is in breach of any legislation in South Africa – Typically:

- Water license (04/B72K/ACGIJ/962)
- Occupational Health and Safety Act
- South African Mine Health and Safety Acts and regulations (Act 29 of 1996)

- Explosive Acts and Regulations - South Africa
- DWA and the National Water Act.
- Foskor COP's
- Foskor Engineering Specifications
- The latest revisions of the SANS standardized specifications and Foskor Specifications as applicable at the time of quotation shall apply to this contract.

Note! The equipment to be capable of continuous operation 24 hrs/day, 365 days/year with operating availability equal to 100%.

### 16.3 SITE GEOGRAPHY

The plant is located at Phalaborwa, Limpopo, South Africa

### 16.4 AMBIENT CONDITIONS























- Ambient temperature

Summer	35 °C Avg.	50 °C Max
Winter	17 °C Avg.	2 °C Min

- Site Altitude: 380 m
- Prevailing wind direction: Generally South Easterly - Maximum design velocity 40 m/s (144 km/h)
- Very dusty conditions
- Average annual rainfall = 540 mm



**16.5 FOSKOR GENERAL ENGINEERING SPECIFICATIONS (SHOULD BE CONSULTED BEFORE FINALIZATION OF ANY DESIGN OR SPECIFICATION)**

	Name	Modified	Modified By
	Engineering Specification Index	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS001 - General Design Information - Rev 1	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS002 - Engineering Drawings - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS003 - Quality Control Procedures - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS005 - Concrete and Formwork - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS007 - Plate work - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS008 - Welding procedures - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS009 - Structural fabrication and erection - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS011- Piping - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS012 - Pressure vessels - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS013M - Painting and Protective Coatings	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS014 - Rubberlining - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS015 - Fencing - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS016 - Roofing and side cladding - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS017 - Fuel - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS018 - Lubrication - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS019 - Liquid containemt bund walls - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS020 - General purpose valves - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS021 - Gearboxes - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GS022 - Chainblocks and lever hoists - Rev 0	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu
	GSI-004 - Field Instrumentation Standards	... 15 April, 2016	<input type="checkbox"/> Khayelihle Pepu

Service provider /Contractor /Supplier - Please ensure that you have the latest copy of the specifications before any activity is committed.

## 16.6 SPECIFICATION

ELECTRICAL SPECIFICATIONS		
<u>NUMBER</u>	REVISION	TITLE
EE-1	Latest Revision	Motor Control Centre & Switchgear
EE-2	Latest Revision	Squirrel Cage Induction & Wound Rotor Motors
EE-11	Latest Revision	Power Factor Correction Equipment
GE-1	Latest Revision	Design Criteria for Electrical Installations
GA-1	Latest Revision	Procedures for Enquiries & Tenders
GD-1	Latest Revision	General Requirements for Design, Project Management & Tenders
GD-2	Latest Revision	Engineering Change Order (E.C.O) Procedure
GM-1	Latest Revision	Mechanical Equipment
GM-5	Latest Revision	Pipe Standards
GM-6	Latest Revision	Engineering Drawing & Document Requirements
GM-8	Latest Revision	Surface Protection
GM-3	Latest Revision	Painting & Surface Protection of Steel
GS-1	Latest Revision	Structural Steel work & Plate work Fabrication & Erection
GQ-1	Latest Revision	Quality Control
GI-1	Latest Revision	General specifications & Procedures
GI-2	Latest Revision	Installation & Commissioning
GI-3	Latest Revision	General Equipment Specification
GI-4	Latest Revision	Field Instrumentation Specification

#### **16.7 ADDITIONAL SPECIFICATIONS IF REQUIRED**

- None

#### **17 PROJECT MANAGEMENT - CONTRACTOR**

Not applicable

##### **17.1 ADDITIONAL PROJECT MANAGEMENT REQUIREMENTS:**

- None

##### **17.3 PLANNING AND SCHEDULING:**

Not applicable

##### **Typical aspect that need to be adhered to**

- None

#### **18 LIAISON AND CO-OPERATION WITH OTHERS**

All communication will be initiated via the Foskor Rotable Administrator

##### **18.1 ADDITIONAL REQUIREMENTS**

- None

##### **18.2 PROJECT PLANNING/SCHEDULING**

- Not applicable

##### **Typical aspect that need to be adhered to**

- None

#### **19 GENERAL CONDITIONS – COMMERCIAL**

##### **19.1 EXTENSIONS, PENALTIES AND RETENTIONS**

- a) Extension on the promised completion or Milestone date may be requested but needs to be approved by Foskor. The contractor should be in possession of a formal document issued via Foskor Procurement indicating that this request was approved

- b) Any additional works not defined in the order needs to be approved by Foskor in writing before any work commence.

Description	Condition	Duration
Penalties	2% per week	Late Delivery after promised completion date
Performance Bond	0% of Contract Value	0 Year after completion
Type of Contract	Foskor General condition of contract	
Tender price validity	3 months	
Escalation	None	None

All delays must be immediately brought under the attention of the section engineer and the responsible party agreed upon immediately.

## 19.2 AFTER SALES SERVICE OR REQUIREMENTS

19.2.1 After sales service requirements are listed below:

- As indicated in Section 2 of this document

## 19.3 INVOICE DUE DATES

The due dates for claim certificate are the 15<sup>th</sup> of every month. Invoices are due the latest the 20<sup>th</sup> of every month.

## 20 TENDER EVALUATION CRITERIA

- As part of the process to assist with the evaluation of the bidder's proposal/quotation and to make an informed decision in the awarding of this tender, the following information is required
- The following tender evaluation criteria will be used for adjudicating the Contractor submitted tender.
- Please provide the required documentation as requested in the "Proof/documents to be submitted" column. Please be specific when submitting documents by ensuring that they answer the item specified.
- Please use the annexure number as indicated to identify the proof submitted.
- Failure to submit the relevant documentation as requested in the Evaluation criteria document may lead to a disregard of the submitted tender.

## 20.1 MANDATORY REQUIREMENTS

Bid submission not meeting the mandatory requirement will result in the bid being disqualified.

No	Mandatory Requirements	Comments
1	ISO 9001 certification	Submit documented as proof
2	Provide a <b>comprehensive description</b> of your motor repair, rewind and testing <b>facilities</b>	Submit description

## 21 EVALUATION CRITERIA (TECHNICAL)

Evaluation Criteria (Technical)				
T(Insert Tender Number)T035/23 - Motors Repair and Rewind Contract				
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted	Notes
<b>Experience &amp; Team competence - <u>Section Weight not to be less than 25%</u></b>				
1	Company Experience - Previous Motors Repair and Rewind experience for the scope of motors indicated in this tender <b>Scoring:</b> <div> <div>&lt; 3 years</div> <div>0%</div> </div> <div> <div>3 year</div> <div>25%</div> </div> <div> <div>4 years</div> <div>60%</div> </div> <div> <div>5 years</div> <div>100%</div> </div>	20%	Give reference list of contacts older than 5 years, with values and contact numbers for verification	<u><b>Annexure A</b></u>
2	Team - Ability to provide team(s) with skills and experience for motor repairs and rewinds <b>Scoring:</b> <div> <div>No organogram nor/or CVs</div> <div>0%</div> </div> <div> <div>Inadequate organogram and CVs</div> <div>40%</div> </div> <div> <div>Adequate organogram and CVs</div> <div>100%</div> </div>	20%	Provided a comprehensive organogram with <b>relevant experience</b> and Provide brief one-page CV's as proof.	<u><b>Annexure B</b></u>
3	Quality Control <b>Scoring:</b> <div> <div>QCP &amp; ISO certificate not provided</div> <div>0%</div> </div> <div> <div>QCP &amp; ISO certificate provided</div> <div>100%</div> </div>	20%	Provide your generic <b>Quality Control Plan</b> for motor repairs and  Provided your <b>ISO 9001</b> certificate	<u><b>Annexure C</b></u>
4	Motor OEM accreditation <b>Scoring:</b> <div> <div>accreditation letter not provided</div> <div>0%</div> </div> <div> <div>accreditation letter provided</div> <div>100 %</div> </div>	20%	Provide a motor repair and rewind accreditation letter from an associated OEM to perform rewinds	<u><b>Annexure E</b></u>
5	Repair facilities <b>Scoring:</b> <div> <div>Facilities description not provided</div> <div>0%</div> </div> <div> <div>Facilities description provided</div> <div>100 %</div> </div>	20%	Provide a comprehensive description of your motor repair, rewind and testing facilities describing all the services rendered inhouse and also indicated what services you outsource, including	<u><b>Annexure F</b></u>

Evaluation Criteria (Technical)				
T(Insert Tender Number)T035/23 - Motors Repair and Rewind Contract				
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted	Notes
			the mandatory full load test.	
	<b>Total Technical Score</b>	<b>100.00%</b>		
<b>Note: In order for the bid to be considered the bidder needs to score 70% and above, and comply to all mandatory requirements</b>				

## 22 PRICING SCHEDULE

Please check the pricing schedule.

### 22.1 MEASUREMENT AND PAYMENT CLAUSES:

Measurement and payment clauses of the COLTO (1998) Standardised Specifications, as well as the Particular Specifications, shall be deemed to form part of and included in the pricing instructions.

### 22.2 UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units. Abbreviations used in the Bill of Quantities are as follows:

%	–	Percent	m <sup>3</sup>	–	cubic metre
h	–	Hour	m <sup>3</sup> .km	–	cubic metre-kilometre
ha	–	hectare	mm	–	millimetre
kg	–	kilogram	MN	–	meganewton
kℓ	–	kilolitre	MN.m	–	meganewton-metre
km	–	kilometre	MPa	–	megapascal
km-pass	–	kilometre-pass	No.	–	number
kPa	–	kilopascal	P C sum	–	Prime Cost sum
kW	–	kilowatt	Prov. sum.	–	Provisional sum



## 22.5 SCHEDULE SUMMARY:

Description	Amount R
GENERAL REQUIREMENTS AND PROVISIONS	
TOTAL excl. VAT	
VAT @ 15%	
TOTAL incl. VAT	

All price alterations must be signed for by the bidder confirming that such changes were made by the Bidder. **PLEASE NOTE THAT PRICE CHANGES WITHOUT A SIGNATURE WILL LEAD TO THE DISQUALIFICATION OF THE BID SUBMITTED.**

**NOTE:** The onus lies with the tenderer to make sure that all formulas and calculations are correct. Calculation errors discovered during the evaluation process will be logged as a non-conformance and the tender/quotation will therefore be disregarded

## 23 ACCEPTANCE

The conditions and requirements as stated in this "Scope of Work" are accepted with the following **exceptions/exclusions**: -

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The conditions and requirements as stated in this "Scope of Work" are accepted with the following **inclusions**: -

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## 24 SUB-CONTRACTOR (PLEASE PROVIDE LIST AND FUNCTION)

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**Failure to complete this form will lead to disqualification – Please do not leave blanks!**



BBBEE Level	<input type="text"/>	Black Ownership	<input type="text"/> %	Black Woman Ownership	<input type="text"/> %
Tender Validity	<input type="text"/> Days	Manufacturing Period	<input type="text"/> Days	Installation Period	<input type="text"/> Days
Guarantee	<input type="text"/> Months	Commencement after receipt of official purchase order	<input type="text"/> Days		
Payment terms	<input type="text"/>				

Price Basis for the duration of the contract/till supply of goods (Please tick):

Fixed	<input type="checkbox"/>	Duration of fixed price	<input type="text"/> 12 Months <input type="checkbox"/>	<input type="text"/> 24 Months <input type="checkbox"/>
Variable	<input type="checkbox"/>	Price Base Date	<input type="text"/>	

If variable provides price variation factors, percentages and formula in the cover letter. (Please specify indices to be used)

Price variation factors & percentages (e.g. material, labour, fuel, overheads, admin etc)

Factor	%	Factor	%	Factor	%	Factor	%	Factor	%
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Where prices include a foreign currency rate please provide:

% of price, subject R O E	<input type="text"/> %	ROE	<input type="text"/> = ZAR
ROE Base Date	<input type="text"/>		

**Note: If the above fields are not completed, it is confirmed that the quoted price/s are valid for the entire contract period mentioned and no escalation in the price is allowed under any circumstances.**

I, \_\_\_\_\_ in my capacity as \_\_\_\_\_ for and on behalf of \_\_\_\_\_ hereby acknowledge that I have read and understand the Instruction to Tender and the Scope of Work as detailed in this document and accept all the Terms and Conditions of Tender **T103-21**.

Signed at \_\_\_\_\_ on this the \_\_\_\_\_ day of \_\_\_\_\_ 2022

Signature: \_\_\_\_\_

**Witnesses:**

1. \_\_\_\_\_ Name: \_\_\_\_\_

2. \_\_\_\_\_ Name: \_\_\_\_\_

For and on behalf of Foskor (Pty) Limited

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Designation: \_\_\_\_\_ Date: \_\_\_\_\_

**Note:** It is imperative to complete this schedule in full where applicable, marked "N/A" where not applicable and signed off in full, **unsigned bids will not be accepted**. All the supporting documentation requested with the tender document, scope of work and evaluation criteria need to be submitted with the tender. Tenders received without supporting documentation requested for the tender evaluation **will not be considered**.

## 25 DOCUMENTED INFORMATION

DESCRIPTION	RESP.	LOCATION	FILE NAME / INDEX	RETENTION TIME (MINIMUM)
Scope of Works	Procurement	Procurement	Procurement	As per Procurement Policies and procedures

## 26 REFERENCES

Code of Practice Foskor Risk Assessment (COP 01).

Quality Management Systems – Requirements (ISO 9001:2015).

Environmental Management Systems – Requirements with guidance for use (ISO 14001:2015).

Occupational Health and Safety Systems – (ISO 45001)