

ANNEXTURE B – Scope of Work and Deliverables

SCOPE OF WORK

SCOPE - EXTENT OF WORK OR SERVICE REQUIRED

1 General Scope Considerations:

The relevant engineering support personnel will have at least basic Health and Safety training, induction and HIRA training before entering Foskor site. There may be conditions based on risk assessment where a work permit will be required like Draughting measurement on site. A Work permit will have to be completed for this high-risk work.

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.

3 Disposal of refuse

The Contractor shall be responsible for disposal of refuse and waste generated by his staff daily. The site is to be kept clean, neat, and tidy, by complying with Foskor Waste Management COP.

4 General requirements for commissioning

Commissioning or handover will be executed as per Foskor Procedures or as directed by the Engineer. Normally the Foskor Punch list and Hand over certificate will be used.

5. Sub-Contracting and joint ventures

The primary aspect of the works may not be subcontracted. For subcontracting the relevant companies supporting documentation needs to support the bidder's tender.

Joint Ventures must be declared in the bidder's tender with all relevant supporting documentation.

SCOPE

1.1 Scope of Works

This scope is for engineering support and no physical tool work is foreseen expect measurements, drawing verifications, meetings, etc.

This service contract is for 2 years.

The primary field of support is Civil, Structural. This portion may not be subcontracted.

The secondary field of focus will be Mechanical – This portion may be subcontracted as and when required.

In summary this Scope entails the following: - See further breakdown below.

- Investigation and site support
- Meetings
- Site assessment
- Professional Engineering Support and sign off – smaller tasks.
- Engineering assessment
- Concept formulation and recommendations
- Cost estimation High level
- Site measurements
- 3D scanning
- Design review
- Draughting

1.1 Professional Engineering Support

This service will be required at Foskop Phalaborwa site. The Professional Engineers to be registered with ECSA

This field of Expertise is Mechanical. Structural and Civil. At least 2 Years' experience in the relevant field. Experience in SANS standards as Foskop Engineering standard are based on Sans standards but have been adjusted to accommodate the Mine Health and Safety Act.

This service will be the following – typical but not limited to

- Signing of Foskop drawings where a drawing was made by Foskop – This will require a review to ensure compliance – Correction to be communicated with Foskop Draughtsman
- Review a Foskop design and sign off. Foskop to compile a design in Prokon or in a report, drawings, etc and this needs to be reviewed where a report is compiled and signed off and presented to Foskop PTY Ltd
- Site assessment – a condition may arise where the needs for a PR Eng initial assessment is required typically on a urgent basis. The required response time is within one day. This will

assist FOSKOR to determine the follow up actions if required. A formal letter will be presented to FOSKOR with Signature of PR Eng

- Assessment of a site condition or a problem and support FOSKOR to find / select a viable approach to the problem.
- Cost Estimation of a proposal.
- 3D Scanning – This can be executed as part of concept formulation to determine basic dimensions to assist concept formulation. This service will typically be outsourced to a third party. FOSKOR will receive the Data cloud in CAD format. The Engineering Support Service will obtain all the critical dimensions from the data cloud.

3.3.1.2 Draughting Service

This service will typically go hand in hand with the professional Engineering support.

The intention is that this will entails smaller draughting of recommendations made by the PR Eng

- Typical example – A beam is damaged or corroded and the Professional Engineer is requested to review the impact and then support with recommended actions. If this require drawings the drawing needs to be compiled and signed off and presented to FOSKOR
- Pipe support as indicated by Engineer

This support includes site measurements and verifications.

FOSKOR may also request support on smaller internal drawing requests.

Management of Activities and tasks

A logbook needs to be kept which will form part of invoicing. FOSKOR will approach the consulting company whereby a estimate will be agreed upon before the works commence. This will form the basis for controlling the contract. Invoices will be presented with the required supporting documentation. This includes the logbook which was signed off by the respective client for which the work was done.

4. PROJECT URGENCY

Project urgency is defined below:

- This project is expected to be executed in normal working hours.
- Proper communication to be managed by contractor and regular reporting to be done by the contractor regarding meeting deadlines.

5. 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.

6. BATTERY LIMITS – INCLUSIONS AND EXCLUSIONS – TYPICALLY REQUIRED WHERE SITE WORK TAKES PLACE

E.

F. 6.1 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	C	2.1 Labour	C	3.1 Plan, Management, QA, QC	C	4.1 Site Security	C	5.1 All rigging equipment (Slings, Chain blocks, turners, etc	C	8.1 Entry and Exit	C	7.1 All communication devices like laptops, computers, networks, radios, cellphones, etc	C
1.2 Potable connection point	C	2.2 Materials	C	3.2 All quality test Civil, Paint, Mechanical, etc	C	4.2 Foskor ID Card	C	5.2 Rigger	C	8.2 First aid box at place of work	C		
1.3 Connection to construction water supply	C	2.3 Equipment	C	3.3 Sampling and laboratory testing	C			5.3 Mobile cranes	C				
1.4 Change rooms	C	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	C	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	C	13.1 Transport all on site to waste to Foskor designated waste sites	C	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	FF	17.1 All labour as per Scope of Work to execute task including management	C	18.1 Sandblasting or flash blast		19.1 Scaffolding Supply & Erect	FF	20.1 All Portable Electrical Equipment	C	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	C	16.2 Conveyor 59 Drive Gearbox	FF			18.2 Compressor	C	19.2 Scaffolds be managed by the Contractor	C	20.2 Hot Work Equip as per Foskor COP - Welding Machines, Gas Cutting, Grinding, Gauging, etc	C		
15.3 Fuel fire protection	C	16.3 Idlers, Rollers and Frames	FF			18.3 Air for power tools - If available	FF	19.3 Cherry Picker's – only if available by pre-booking	F 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	C
15.4 Refuelling								19.4 Cherry Picker's Driver– Trained and authorized driver					

22. Certificates		23. Consumables		24. Storage and inventory control		25. Electrical					
22.1 Supply All certificates as required	C	23.1 Welding rods	C	24.1 Protective coverings/tarpaulins	C	25.1 Generators	C	25.4 Temporary lighting	C	25.7 Electric panel + distributing wiring	C
		23.2 Bolts & Nuts, etc.	C	24.2 Storage area and inventory control	C	25.2 Electrical Extensions	C	25.5 Power for tools on site from existing Foskor electrical supply point (Welding plugs and 220 v plugs	C	25.5 Electrical connection point	F
						25.3 COC Site Establishment	C	25.6 Connection to Electrical supply	C	25.9 Electrical and Instrumentation Installation	C

**** NOTE**

Foskor has made provision for the supply of scaffolding free of charge depending on 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.

7. AS BUILT DRAWINGS

As built drawing requirement is defined below:

- Not Applicable

Note! – All drawings to be delivered in AutoCAD electronic format. All drawings to be detail engineering drawings.

8. QUALITY – FOR NOTE ONLY

- 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 and performing the Quality Control measures to ensure that the deliverables comply with the specifications and standards mentioned in the scope of work.
- iv. Any change requests / additional work resulting due to inadequate quality management system will be for 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.

9. PROJECT DELIVERABLES

G. 9.1 THE DELIVERABLES FOR THIS PROJECT INCLUDE:

- Engineering Support, Professional Engineering reports, recommendation, professional opinion and Drawings

H. 9.2 TRANSMITTAL OF DOCUMENTS AND MANUALS

Documents and Manuals to be submitted in the flowing formats:

Type of Document	Hard Copy	Electronic Format
Manuals	N/A	N/A
Drawings	N/A	N/A
Reports	N/A	N/A
Data Books	N/A	N/A

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

I. 9.3 PROJECT COMPLETION – FOR NOTE ONLY

On project completion, the contractor will issue FOSKOR with a Handover certificate. The handover certificate will be accompanied by the following documents:

10. DOCUMENTS / DRAWINGS ISSUED BY FOSKOR

Drawing or Document No	Title	Revision
	NONE	
Note	Please read your Scope of Work	

11. ON-SITE SUPERVISION REQUIREMENT

- A work Permit needs to be compiled-
 - This will require the company to collect a work permit from Safety.
 - All relevant training o Sie Specification o Baseline risk assessment – Similar to existing Project Section Baseline risk assessment o Medicals

- Obtaining all relevant signatures on Work permit
- A FOSKOR 2.6.1 appointed site manager will be supplied.

Note - All Persons to enter site will have Basic Health and Safety, HIRA and First Aid training

12. TENDER DELIVERABLES

The deliverables will include: -

- Complete FOSKOR pricing schedule (BOQ)
- 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.

13. SAFETY

This is an indication of Safety Requirement and what needs to be taken into account when conducting work on FOSKOR site. Service provider to refer to the full and updated FOSKOR COP's available:

- i. The service provider and sub-service providers need to always comply with the Mine Health and Safety act.

All FOSKOR 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, FOSKOR ID Card, etc. is approximately R800 per person. Exit medicals need to be done on termination of the contract.
- iv. The successful tenderer will be required to compile a FOSKOR 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 as well as other TMM's to be inspected before entering FOSKOR Premises.
- vi. All person competencies to be verified before being allowed to work on FOSKOR premises for a specific task.
- vii. The service provider must compile a Safety File as per FOSKOR 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 FOSKOR Safety System. Analyse data and trends and recommend preventative measures where required.
- x. Ensure all authorizations are in place as per the FOSKOR Safety System. Arrangement with FOSKOR 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 must complete the Foskop induction course and must undergo a medical examination at the Foskop clinic on 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 areas.
- xix. All the required PPE and Safety Equipment are for the service provider's account.
- xx. All service providers must ensure that:
 - a. Their 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 Foskop Phalaborwa site with effect from 1 April 2014. This training is not presented by the Foskop 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 provide guidance on training requirements. A summary of the training must be completed as well as status on required authorization as per Foskop COP's.
- xxiii. Training certificates will be accepted when 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

J. 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 Practice) No. 25 for Service Provider Control
(Available on request)
- v. FOSKOR (Pty) Ltd. COP (Code of Practice) 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)

K. 13.2 SUMMARISED REQUIREMENTS/EXTRACTS FROM FOSKOR COP'S

13.2.1 Before entering and operating a service vehicle (Own vehicle) on FOSKOR site, the appointed service providers shall:

- i. Ensure that their driver/s have a valid national driver's licence for the specific class of vehicle, have

been tested by the Foskop mobile equipment training centre and authorised by a Foskop MHSA (Mines Health and Safety Act) regulation 2.13.1 appointee for the class of vehicle to be used on site. (Contact the Foskop mobile equipment training centre at 015 789 2840 to make an appointment for competence testing and authorisations).

ii. The appointed service provides shall, before entering and operating a vehicle or trailer on the Foskop premises:

- a. Obtain permission from the Foskop Safety and Security manager to operate their nominated service vehicle/s or trailers on the Foskop site. (Forms will be provided)
- b. Obtain a certificate of fitness from the Foskop Light Vehicle maintenance workshop supervisor or appointed Foskop inspector for their 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 their service vehicles/trailers have been inspected (Daily) by the Foskop standard (COP 59) to ensure that they are safe and fit for use. (Forms will be provided) See Foskop COP 59, Trackless Mobile Machinery for details.

13.2.2 Before entering and working on Foskop site the appointed service providers shall ensure that their 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 their 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 Foskop 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 Foskop site the appointed service provider shall:

i. Ensure that their portable electrical equipment have been tested and declared safe for use by the Foskop electrical services workshop.

13.3 PERMIT TO WORK – FOR NOTE ONLY

Before any on-site work under this contract may commence, the appointed or successful service provider shall obtain a PERMIT TO WORK from FOSKOR. 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 Safety, 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 the contract has been awarded.

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 on 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 and Safety Principles and HIRA training.

See FOSKOR'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 FOSKOR 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 Foskor site
- viii. All the appointed service providers' employees shall receive/have received the following training:
 - a. First Aid Level 1 (Provide own training)
 - b. Working at heights (Provide own training)
 - c. Basic Health & Safety Principles (Provide own training)
 - d. HIRA (Provide own training)
 - e. Basic Firefighting. (Provide own- or receive Foskor training, contact 015 789 2531 for bookings)
 - f. Lock-out. (Provide own or receive Foskor training, contact 015 789 2531 for bookings)

All training not provided by Foskor must be verified by the Foskor training superintendent 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 Foskor site induction training at the Foskor Security office.
- x. All the appointed service providers' on-site employees shall receive site-specific induction training provided by the Foskor 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 Foskor MHSA 2.13.1 appointee and signed by all the service providers' employees. Make use of Foskor'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.

13.4 SAFETY FILE – FOR NOTE ONLY

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 relevant area responsible Safety Representative as indicated by Foskor at the Kick-off meeting.

ISO clause / Description of item File divider

1. Integrated Management System.

Clause 5.1 & 5.2

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

L. 13.6 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. Baseline 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. Employee records of actual time worked (Normal and overtime).
- ix. Copy of on-site induction training.
- x. Records of inspections of TMM (Trackless Mobile Machinery) and trailers. See Foskor COP 59, Trackless Mobile Machinery for details.
- xi. Records of issues and inspections of PPE (Personal Protective Equipment) and safety equipment. See Foskor COP 65, Personal Protection Equipment for details.

- xii. Records of issues and inspections of PEE (Portable Electrical Equipment). See Foskop COP 60, Portable electrical Equipment for details.
- xiii. Records of issues and inspections of tools and equipment. See Foskop COP 63, hand tools for details.
- xiv. Records of daily, weekly and monthly 2.6.1 / SHE Rep safety inspections. See Foskop COP 22, SHE Inspections for details.
- xv. Records of daily green-area and safety talks. See Foskop COP 7, Communication for details.
- xvi. Any other documents, certificates or records as requested by a Foskop official deemed necessary to ensure that all safety, legislative and administrative requirements have been met.

Note:

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

M. 13.7 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!

14. **PARAMETERS**

N. 14.1 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.

O. 14.2 SPECIFICATIONS, CODES, STANDARDS AND REGULATIONS

The latest edition of the South African National Standards in effect 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 but not limited to:

- Water License - 04/B72K/ACGIJ/962 Requirements
- Occupational Health and Safety Act (Act 85 of 1993)
- Mine Health and Safety Acts and regulations (Act 29 of 1996)
- Explosive Acts and Regulations - South Africa
- DWS and the National Water Act.
- Foskor COP's and applicable General SHEQ Requirements
- Foskor Engineering Specifications
- Chamber of Mines / Mine Council SHEQ Requirements (Milestones)
- Atmospheric Emissions Licence - 13/2/AEL-02 Requirements
- The latest revisions of the SANS standardized specifications and Foskor Specifications as applicable at the time of quotation shall apply to this contract.
- Environmental Authorisations will be shared to contractors for compliance.

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

P. 14.3 SITE GEOGRAPHY

The plant is located at Phalaborwa, Limpopo, South Africa

Q. 14.4 AMBIENT CONDITIONS




















- Ambient temperature

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

- R. 14.5 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.

14.6 SPECIFICATION

ELECTRICAL SPECIFICATIONS		
NUMBER	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

15.0 **PROJECT MANAGEMENT – CONTRACTOR**

- a) Nominate a single window of communication to Foskor – Typically the appointed contractor 2.6.1
- b) Attend meetings as agreed during the project kick-off meeting

- c) Submit Progress reports (Format & interval) as defined in the Kick-off Meeting (Invoicing, Labour, Performance against the plan, Contractor purchases, Quality Management, Safety, Etc.
- d) Manage and participate in the "Daily Journal" as part of executing the project
- e) All meetings will be held at FOSKOR offices unless otherwise stated
- f) The contractor to provide updated project management plans on progress as defined by the FOSKOR Project Engineer.
- g) **Project progress updates** - If the contractor cannot produce proper updates on a WBS then the contractor will be required to subcontract this function to produce the WBS updates for the duration of the project. This cost must be included in the contractor's price

The Service provider is responsible for managing the project and this is graphically displayed below indicating where what functions lies. Graphical presentation only covers some basic aspects.

16. **PLANNING AND SCHEDULING: - FOR NOTE ONLY**

- The Project Section has a planning standard that needs to be adhered to during the execution as per the relevant order placed
- The FOSKOR scheduler can be contacted to provide schedule details input and guidelines if needed.
- Schedule must be compiled within one week after kick-off meeting conducted by the FOSKOR Project Leader
- The Contractor schedule needs to be signed off by contractor 2.6.1 before approval by FOSKOR
- The FOSKOR scheduler will issue the Templates to be used - This template must be adhered to, and no changes should be made.
- Progress Update is needed every once a week a day before the weekly progress meeting or as requested.
- The progress Updates to be submitted to FOSKOR Scheduler/Planner via email.
- It is the contractor's responsibility to appoint the competent person to manage the contractors schedule which that person will directly communicate with FOSKOR Scheduler - If the contractor's responsibility to add the cost of a competent person on the project. Commercial action to be taken if the performance in planning is lacking.
- FOSKOR requires all contractors to use MS Project software which it will be fully implemented latest 01 February 2022.

16.1 Typical aspects to be adhered to:

- It is the subcontractor's responsibility to produce a detailed schedule which tie up to the FOSKOR standards of requirements.
- The Schedule must not have open ended activity task.
- The schedule must be fully resourced.
- The schedule must not have constraints.
- The calendar must be created and assigned in the schedule. Confirm the templates with the FOSKOR Scheduler
- It is FOSKOR responsibility to review the schedule before it's been approved.
- A schedule must be approved by Project Scheduler/Project Manager and Project Engineer.
- The approved baselined schedule must be updated by the contractor to show Planned vs Actual.
- The contractor must show S-Curve which will be constructed from the schedule.
- Project updates must be submitted to the Project Planner/Scheduler for review.

17. **LIAISON AND CO-OPERATION WITH OTHERS**

- The CONTRACTOR/ SERVICE PROVIDER shall be required to co-operate and liaise with FOSKOR appointed Project Manager.
- The CONTRACTOR/ SERVICE PROVIDER must note that construction is within an operational plant.
- The CONTRACTOR/ SERVICE PROVIDER may appoint a FOSKOR approved sub-contractor.
- The CONTRACTOR/ SERVICE PROVIDER shall be required to work in conjunction with the FOSKOR appointed structural-, electrical-, equipment- and instrumentation installation contractor – if applicable.

T. A **PROJECT PLANNING/SCHEDULING**

- The Projects section has a planning standard that needs to be adhered to during the execution as per the relevant order placed.
- The FOSKOR Scheduler can be contacted to provide schedule details input and guidelines if needed.
- Schedule must be compiled within one week after kick-off meeting conducted by the FOSKOR Project Leader
- The Contractor schedule needs to be signed off by contractor 2.6.1 before approval by FOSKOR.

- The Foskor scheduler will issue the Templates to be used - This template must be adhered to and no changes should be made.
- Progress update is needed every once week a day before the weekly progress meeting or as requested.
- The progress updates to be submitted to Foskor Scheduler/Planner via email.
- It is the contractor's responsibility to appoint the competent person to manage the contractors schedule which that person will directly communicate with Foskor Scheduler - If the contractor's responsibility to add cost of the competent person on the project. Commercial action to be taken if the performance in planning is lacking. Foskor requires all contractors to use MS Project software which will be fully implemented