



FOSKOR (PTY) LIMITED

SCOPE OF REQUIREMENTS

For

Stack Emission, Leak Detection & Fence-line Monitoring (TVOCs) and Pollution Prevention Equipment Optimization (Scrubber Efficiency) (Three Years Contract)

1. INTRODUCTION

Foskor (Pty) Ltd. is an opencast mining and beneficiation operation situated in Phalaborwa. The core business of the Phalaborwa operation is the mining and beneficiation of phosphate rock. (The Foskor operation situated in Richards Bay is primarily a producer of phosphoric acid, phosphate-based fertilizers, and lower volumes of sulphuric acid).

Foskor (Pty) Ltd (Mining Division) is an Open Cast Mine that produces phosphate rock for export or domestic beneficiation. Approximately 2.2 million tons of phosphate rock is produced annually. The product is finely ground apatite mineral from coarsely crystalline calcium-fluoride-phosphate compound of igneous origin. The intermediate and final products are for the domestic and international markets and provide the following advantages:

- Make South Africa self-sufficient from phosphate imports.
- Earn foreign currency from the export of the products.
- Create approximately 2000 direct job opportunities, with associated indirect job opportunities in the Greater Phalaborwa region.

The dominating rock type in the Phalaborwa area, older than 3000 million years, is granite-gneiss of the Archaic Complex. Intrusive in this are younger rock types of the Phalaborwa Igneous Complex. Inclusions of serpentine, talc and amphibole schist are found in the granite-gneiss and igneous rock.

2. BACKGROUND

Foskor is in possession of the Atmospheric Emission License (AEL) issued by the Mopani District Municipality. This license is issued in terms of Section 40 (1)(a) of the National Environmental Management: Air Quality Act, 2004 (Act no 39 of 2004). The AEL authorizes Foskor to carry out Listed activities 2.4 (*Storage of petroleum products*) and 5.2. (*Drying*) with the equipment described in the AEL. The license is issued subject to the conditions and requirements which are binding to Foskor as the holder of the AEL. One such condition is that all unit processes and apparatus used for the purpose of

undertaking the listed activities, all appliances and mitigation measures for preventing or reducing atmospheric emissions at all times are properly maintained and operated. Hence the commissioning of this study to perform quarterly emissions monitoring on the stacks for dryers and the Loesche mill (Ext 8) and burners installed at the Phalaborwa site, quarterly fence line monitoring, bi annual leak detection for all the fuel tanks and the annual pollution prevention equipment optimization for all the dryers as part of the fulfilment of their AEL emission testing requirements. The monitoring must be performed to comply with the requirements of the Atmospheric Emission License (No. 13/2/AEL-02). Approved sampling methods must be used for the quantification of these pollutants in accordance with Government Gazette 42013 of 31 October 2018 (GN 1207).

3. SCOPE

- 3.1. Quarterly sampling and analysing of stack emissions for PM, SO₂ and NO_x (reported at 10% O₂) for 10 stacks.
- 3.2. Quarterly sampling of TVOCs by installing twelve passive samplers/ Fence line monitoring of TVOCs on the randomly selected sites around the mine
- 3.3. Bi-annual sampling and analysing of Total Volatile Organic Compounds (TVOC) for 20 Fuel tanks (Leak detection test).
- 3.4. Annual Pollution abatement equipment optimization (Scrubber efficiency) for eight dryers using Isokinetic sampling method.

The reference method to be used should meet the requirements of the National Environmental Management Act 107 of 1998, National Environmental Management: Air Quality Act 39 of 2004 and other associated air quality legal and other acceptable requirements furthermore the laboratory to be used for analysis must be ISO1705 accredited. **Detailed Scope on Table 1 and 2**

Table 1: Scope of work- Sources and pollutants to be measured.

Source	Parameters/ Pollutants	Sampling Methodology	Frequency	Number of runs
Isokinetic/ Stack emission test (7 dryers and 2 burners)	PM, SO ₂ and NO _x	Method listed in Annexure A of section 21 Notice (Government Notice no 893)	Quarterly	3 runs per dryer and burner
12 samplers x Passive/ Fence line monitoring of TVOCs	TVOCs	Method listed in Annexure A of section 21 Notice (Government Notice no 893)	Quarterly	Minimum exposure period 7 days
Annual Pollution abatement equipment optimization for eight dryers using Isokinetic sampling method	PM	Method listed in Annexure A of section 21 Notice (Government Notice no 893)	Annually	6 runs per Dryer, 30 minutes per run
Fuel tanks x 20	Leak detection (Total Volatile Organic Compounds (TVOC)	Method listed in Annexure A of section 21 Notice (Government Notice no 893)	Biannually	

4. METHODOLOGY

- Sample and perform the tasks as per method listed in Annexure A of section 21 Notice (Government Notice no 893) and also according to industry & legislative acceptable sampling technique and analysis methods.
- Report results in industry acceptable reporting and report results corrected to 10% O₂.
- Report must include the sampling technique and analysis method used.

5. DELIVERABLES

Deliverables include:

- Stack emission measurement results from all scheduled processes as per acceptable sampling technique and analysis
- Fence line monitoring measurement results as per acceptable sampling techniques and analysis
- TVOC measurement as per acceptable sampling techniques and analysis
- Pollution abatement equipment optimization measurement as per acceptable sampling techniques and analysis
- Provide full technical report on the analysis conducted at planned intervals no later than 21 days after sampling has been concluded.

Note: A non compulsory site visit may be necessary prior to the commencement of the work

6. BASIC SPECIFICATIONS, REQUIREMENTS AND RESPONSIBILITIES

The successful bidder is responsible to:

- a) Comply with all the specifications and requirements of this document.
- b) Comply to all the requirements of Foskor COP 25, Service Provider Control (Available on request).
- c) Supply and transport to site all labour, skill, expertise, and supervision.
- d) Supply required PPE (Personal Protection Equipment) and safety equipment to safely conduct the required service.

7. LEGISLATIVE- AND REGULATORY REQUIREMENTS

7.1 The successful or appointed service provider shall comply with:

- a) The Mines Health and Safety Act with Regulations (Latest revision)
- b) The National Road Traffic Act with Regulations (Latest revision)
- c) All applicable national and international legislative requirements and regulations.

7.2 The successful or appointed service provider shall comply with the latest revisions of the following Foskor COP's (Compendium of Procedures) (COP's, policies and procedures are available on request):

- a) COP 17 Mobile, Technical and Process Training
- b) COP 25 for Service provider Control
- c) COP 56 for Lifting Machinery and Lifting Tackle
- d) COP 59 for Trackless Mobile Machinery
- e) COP 96 Working at Heights

- f) Any other FOSKOR safety, health, quality and environmental policies and procedures deemed applicable by a FOSKOR representative.
 - g) All other FOSKOR procedures and policies applicable to the successful application of this contract.
- 7.3 The successful or appointed service provider shall comply with the following Environmental Specifications, Policies and Procedures:
- a) COP 41 Housekeeping and workplace organisation
 - b) COP 49 Waste Management
 - c) COP 51 Resource conservation, energy, and materials
 - d) COP 70 Storage of petroleum products and other hazardous material
 - e) National Environmental Management Act 107 of 1998 (NEMA)
 - f) National Environmental Management Waste Act 59 of 2008 (NEMWA) as amended.
 - g) The successful service provider shall include in his/her SAFETY FILE, and comply with, the following documents:
 - i. Environmental Aspect and Impact Register (Applicable to this contract).
 - ii. Environmental Objectives and Targets (Applicable to this contract).
 - iii. Waste Management Plan (Applicable to this contract).
 - iv. FOSKOR Atmospheric Emissions License (Copy available on request)
 - v. FOSKOR Waste Management Licence (Copy available on request)
 - vi. FOSKOR Water Use Licence (Copy available on request)
- 7.4 The successful or appointed service provider shall ensure that all his/her on-site employees have been authorised by a FOSKOR regulation 2.13.1 appointee to:
- a) Perform job specific *hazard identification and risk assessments* (FOSKOR Annexure 1.3)
 - b) Operate trackless mobile machinery service provider employees (FOSKOR Annexure 59.7B)
 - c) Work at height (FOSKOR Annexure 96.1)
 - d) Any other FOSKOR activity requiring authorisation as deemed applicable by a FOSKOR representative.
- 7.5 Before entering and operating a service vehicle (Own vehicle) on the FOSKOR site, the appointed service provider shall:
- a) Ensure that:
 - i. In order to access in restricted areas, his vehicle has been fitted with an "internal safety cell" (ROPS – Roll Over Protection Structure) that has been designed, fabricated, tested and certified to comply with the requirements of ISO 3471:2008 - EARTH-MOVING MACHINERY – ROLL-OVERPROTECTIVE STRUCTURES or similar specification.
ROPS COMPLIANCE CERTIFICATES (Fabrication and Installation) TO PRESENTED DURING VEHICLE INSPECTION (See item 5.b.ii)

- ii. His driver/s are in possession of a valid national driver's licence for the specific class of vehicle, has 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.
 - iii. His driver/s has 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 to operate a vehicle in the mine open pits (Restricted or red-flag areas)
(Contact the Foskop mobile equipment training centre on 015 789 2840 to make an appointment for competence testing and authorisations)
- b) The appointed service provider shall, before entering and operating a vehicle on the Foskop premises:
 - i. Obtain permission from the Foskop Safety & Security manager to operate his nominated service vehicle/s on the Foskop site. (Forms will be provided)
 - ii. Obtain a certificate of fitness from the Foskop Light Vehicle maintenance workshop supervisor or appointed Foskop inspector for his nominated service vehicle/s. Inspections conducted daily between 08:00 and 08:30 and between 13:30 and 14:00 (Excluding Fridays) at the Light Vehicle Maintenance workshop.
 - iii. Submit the above permission and COF in at the main security office for issue of a vehicle access disk.
- c) Ensure that his service vehicles have been inspected (Daily) in accordance with the Foskop standard (COP 59) to ensure that they are safe and fit for use. (Forms will be provided)
- d) See Foskop COP 59, Trackless Mobile Machinery for details.

7.6 Before entering and operating/working on the Foskop site the appointed service provider shall ensure that his driver/workmen are:

- a) Briefed on the required task and have been informed of any abnormal conditions/situations.
- b) Physically, emotionally, and mentally fit to perform their duty.
- c) Issued with the necessary PPE (Personal Protective Equipment) to safely operate his service vehicles and perform the required services on mine and enroute to the waste disposal sites.
- d) Before commencement of work:
 - i. All tools and equipment shall have been inspected and tested to be in a good and safe working order.
 - ii. 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.

7.7 Before entering and operating/working on the Foskop site the appointed service provider shall ensure that his portable electrical equipment has been tested and declared safe to use by the Foskop electrical services workshop.

7.8 Before accessing overhead cranes and/or vehicle post lifts whereupon work is to be conducted, the equipment shall be locked out at the power source. The lock shall be marked and tagged. The tag shall contain the service providers business name, employee name responsible for lock and contact numbers. See Foskop COP 53, Lock-out system, and usage for details.

- 7.9 Although every effort has been made to ensure that the information contained within this document is correct, it remains the responsibility of the bidder to verify actual status and site conditions. (A site visit can be arranged)

8. PERMIT TO WORK

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

- 8.1 The PERMIT TO WORK can be obtained from- and on completion returned to the Legal Administrator, Foskop Safety department.
- 8.2 Obtain a contract or order number from the Foskop procurement department.
- 8.3 Provide a name list, including ID numbers, residential and postal addresses, and telephone numbers of all the appointed service providers' on-site employees.
- 8.4 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.
- 8.5 (NOTE: All NEW- and Employees LEAVING the service of the appointed service provider must undergo an entry or exit medical examination)
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- 8.6 The appointed service providers designated on-site drivers shall receive competence testing and authorisation to operate vehicles on the Foskop site (See item 5 under the heading LEGISLATIVE REQUIREMENTS).
- 8.7 All the appointed service providers' employees shall receive/have received training in:
- a)
 - First aid level 1 (Provide own training)
 - Working at heights (Provide own training)
 - Basic Health & Safety Principles (Provide own training)
 - HIRA (Provide own training)
 - Basic firefighting. (Provide own- or receive Foskop training, contact 015 789 2531 to book)
 - Lock out. (Provide own- or receive Foskop training, contact 015 789 2531 to book)
 - b) 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 alternatively email proof of training and certificates to johanfo@foskor.co.za to confirm compliance before requesting his approval on the PERMIT TO WORK.
- 8.8 All the appointed service providers' on-site employees shall receive the basic Foskop site induction training at the Foskop Security office.

- 8.9 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.
- 8.10 A HIRA (Hazard Identification and Risk Assessment) shall be completed for ALL "typical" tasks that will be completed under this contract. HIRA's to be signed by all service provider employees. Make use of FOSKOR's own HIRA document, Annexure 1.2, contained in of COP 1, FOSKOR risk management (Available on request)
- 8.11 Attach a detailed SCOPE OF WORK describing the required task and -outcome of this contract.
- 8.12 All FOSKOR's appointed MHSA Regulation 2.9.2, 2.6.1, 2.13.1 and 3.1.a managers must undersign/approve the PERMIT TO WORK.
- 8.13 Registration and proof of payment under the Compensation for Occupational Injuries and Diseases Act, no. 130 of 1993. Registration number must be provided.
- 8.14 All relevant documentation and/or evidence of compliance must be attached to the PERMIT TO WORK.
- 8.15 Upon successful completion and approval of the PERMIT TO WORK the security department will issue the appointed service providers' employees with access ID cards valid for 12 months.
- 8.16 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.
- 8.17 The appointed service provider must allow at least three to ten working days to complete all the PERMIT TO WORK requirements.

9. 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 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.

10. REPORTING

- The successful contractor must submit full technical report on the analysis conducted at planned intervals no later than 21 days after sampling has been concluded as per item 5 above.

11. PRICING SCHEDULE

DESCRIPTION	RATE
Year 1 (Stack Emission/ TVOC/ Fence-line Monitoring)	
Quarterly Charge	
Vat @15%	
Total per annum year 1	
Year 2 (Stack Emission/ TVOC/ Fence-line Monitoring)	
Quarterly Charge	
Vat @15%	
Total per annum year2	
Year 3 (Stack Emission/ TVOC/ Fence-line Monitoring)	
Quarterly Charge	
Vat @15%	
Total per annum year 3	
Year 1 (Biannual Leak Detection/ TVOC x 20 Fuel Tanks)	
Biannual Charge	
Vat @15%	
Total per annum year 1	
Year 2 (Biannual Leak Detection/ TVOC x 20 Fuel Tanks)	
Biannual Charge	
Vat @15%	
Total per annum year 2	
Year 3 (Biannual Leak Detection/ TVOC x 20 Fuel Tanks)	
Biannual Charge	
Vat @15%	
Total per annum year 2	
Year 1 (Annual Pollution Abatement Equipment Optimization per Dryer)	
Annual Charge	
Vat @15%	
Total per annum year 1	
Year 2 (Annual Pollution Abatement Equipment Optimization per Dryer)	
Annual Charge	
Vat @15%	
Total per annum year 2	
Year 3 (Annual Pollution Abatement Equipment Optimization per Dryer)	
Annual Charge	
Vat @15%	
Total per annum year 3	
TOTAL PROJECT COST	

12. MANDATORY REQUIREMENTS/ PRE-QUALIFICATION CRITERIA

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

No	Mandatory Requirement	Comments
1	SANAS accredited company for emission test and analysis	Submit the SANAS accredited certificate for the company
2	SANAS Accreditation for the laboratory that will be conducting the analysis and, a written Work Agreement or SLA.	Submit the SANAS Accreditation Certificate/ SLA or Confirmation Letter for the Laboratory

13. VALUATION CRITERIA AND BID ASSESSMENT

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 contract, the following information is required:

Technical Evaluation

	MEASUREMENT CRITERIA	Criteria scoring (%)	Score (%)	Type of proof to be submitted.
1	Company- Previous experience in business of stack emission measurement?	No experience 0% 1- 3 years combined experience = 10% >4 years combined experience = 20%	20%	Give reference list of projects, with values and contact numbers for verification
2	List the top five (5) similar/same contracts awarded in past five years. Provide the following information/details: a) Brief description of the contract type b) Address/ site of the contract c) Name and telephone/ cell number of clear contact person	No previous projects = 0% 3- 4 Projects = 10% >4 projects = 20%	20%	Confirmation letter from the companies indicating the type of work done and the dates or duration of the contract
3	Company – Ability to satisfy technical requirements – Equipment, Vehicles, Offices, Organogram....)	None= 0% Submitted = 20%	20%	List of equipment, vehicles, organogram and address of offices.
4	Team Leader/ project specialist individual qualification in Natural Sciences, chemical Engineering and related experience in the stack emission measurement	Degree/ Diploma and <1year= 0% Degree/ Diploma and 1-3 years=10% Degree/ Diploma and >3 years= 20%	20%	CV indicating number of years the individual was involved with similar type of projects and proof of qualification
5	Understanding of the project- The whole method statement should provide with clearer step by step and details of the method to be used for the sampling and analysis.	Methodology not submitted = 0% Methodology submitted = 20%	20%	Provide detailed method statement with references to the SANAS / SABS / ISO Standards

For the bid to be considered for shortlisting, the bidder needs to score 70% and above and comply to all mandatory requirements

Compiled by



Michael Radzilani
Environmental Management Specialist

Approved by



Joseph J Mathebula
Snr Manager – Production and Tailings
& BSC Chair

TAKE NOTE:

- 1) Any bidder/service provider that fails to comply or to provide/include/supply requested information and/or copies of all requested supporting certificates and documents will result in a reduced evaluation score that could adversely affect the bidder/service providers chance of being awarded this contract/order.
- 2) Any **MANDATORY REQUIREMENT** not met will result in immediate rejection of bid/quotation.
- 3) Any bid/quotation with an evaluation score of less than 70% will not be considered.

TECHNICAL:

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BIDDER:

SIGNATURE

DESIGNATION

DATE

COMPANY STAMP

