

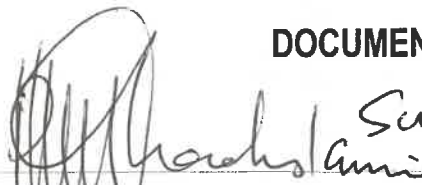


FOSKOR (PTY) LIMITED SCOPE OF REQUIREMENTS

for

**SANAS Accredited Laboratory Services – Chemical and Bacteriological Water
Analysis
Three (3) year contract**

DOCUMENT AND SERVICE CONTRACT APPROVAL

 S04785
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 S04785
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FOSKOR (PTY) LIMITED SCOPE OF REQUIREMENTS

For

Laboratory Services – Chemical and Bacteriological Water Analysis Three (3) year contract

1. INTRODUCTION

Foskor (Pty) Ltd is one of the world's leading phosphate rock and phosphoric acid producers and was established in 1951. Foskor operates two opencast mines for the extraction of pyroxenite ore in order to produce high quality phosphate rock. The process involves crushing, grinding and slurring of the ore, from which the apatite is recovered as a mineral concentrate (referred to in the trade as phosphate rock) by means of froth flotation. About 75% of the annual production of 2.7 million tons of phosphate rock is transported by rail to Foskor's Richards Bay Plant for processing and export as phosphoric acid. The remainder is transported to various domestic fertilizer plants.

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).

2. BACKGROUND

Water plays a significant role in human life, from our health to the economy. By preserving and supporting good water quality we benefit the environment, public health, and the protection of water resources for future generation. The presence of certain contaminants in our water can lead to health issues, including gastrointestinal illness, reproductive problems, and neurological disorders. It is important to monitor water quality to ensure that it is safe for humans to drink it as well as for wildlife and aquatic life.

Temperature, acidity (pH), dissolved solids (specific conductance), particulate matter (turbidity), dissolved oxygen, hardness and suspended sediment are some of the components of water quality. Good water quality implies that harmful substances (pollutants) are absent from the water, and needed substances (oxygen, nutrients) are present. Water quality can often be defined in terms of the chemical, physical, and biological content of water.

For Foskor to operate, a license to operate has to be obtained from the Department of Water and Sanitation and such license came with the conditions for the protection of the water resources within the Foskor premises and with measures that must be put to protect the water resources and some of those measures include taking water quality samples in the rivers, dams and all other water resources within the mine to determine if the mine activities are not affecting the water resources and if they are what measure will be put in place to manage that

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In terms of the Chapter 9.2 of the Mine Health and Safety Act (MHSA) FOSKOR as an employer has an obligation to provide its employees with palatable water hence drinking water samples must be regularly taken to analyze the condition of the water that is provided to the employees and to also verify if the quality meets the SANS 241 in terms of MHSA Schedule 22.9 (2) (c) requirements hence the commissioning of this tender.

3. SCOPE

Foskor would like to appoint a SANAS accredited laboratory for the service of analyzing and providing the results of the surface water samples, drinking water sample and wastewater samples for a period of three years. The samples will be couriered to the laboratory however the laboratory must provide FOSKOR with the sampling bottles for collection of the water samples.

4. METHODOLOGY

The service provider must use the recognized methodology for water analysis and the methodology must be explained and should also comply with the laws, regulations and SANS codes

For Surface water quality's chemical analysis, the following parameters must be analyzed on the collected quality samples

Table 1 Surface Water Quality License Chemical Parameters and Limits

Parameter	Water Quality Limit
pH	5.0 – 9.5
Electrical Conductivity (as EC) in mS/m	200
Total Dissolved Solids (as TDS) in mg/l	1700
Sulphate (as SO ₄) in mg/l	300
Chloride (Cl) in mg/l	180
Sodium (Na) in mg/l	150
Magnesium (Mg) in mg/l	100
Calcium (Ca) in mg/l	80
Nitrate (NO ₃) in mg/l	0.10
Fluoride (F) in mg/l	1.3
Iron (Fe) in mg/l	0.01
Potassium (K) in mg/l	10
Manganese (Mn) in mg/l	0.05

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For waste water quality's chemical and bacteriological analysis, the following parameters must be analyzed on the collected samples

Table 2: Quality of Wastewater Disposed into Dirty Water Facilities

Parameter	Water Quality Limit
pH	5.0 – 9.5
Electrical Conductivity (as EC) in mS/m	250
Total Dissolved Solids (as TDS) in mg/l	1750
Sulphate (as SO ₄) in mg/l	300
Chloride (Cl) in mg/l	180
Sodium (Na) in mg/l	150
Magnesium (Mg) in mg/l	100
Calcium (Ca) in mg/l	80
Nitrate (NO ₃) in mg/l	500
Fluoride (F) in mg/l	1.4
Iron (Fe) in mg/l	0.01
Potassium (K) in mg/l	120
Manganese (Mn) in mg/l	0.05
Faecal Coliform	≤ 1000
Total Coliform Bacteria	
Escherichia	

Drinking water quality – Bacteriological and chemical analysis

The following parameters must be analyzed on the drinking water quality samples.

Table 3 Drinking water Bacteriological parameters and limits

Parameter	Standard Limit SANS 241:2015 Drinking Water
Total coliform Bacteria MPN/100ml	≤ 10
Escherichia Coliform MPN/100ml	< 1
Faecal Coliform CFU/100ml	< 1
Heterotrophic Plate Count CFU/1ml	≤ 1000

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Table 4 MHSA Drinking water chemical parameters and limits

Parameter	Water Quality Limit
pH	5.5 – 9.5
Electrical Conductivity (as EC) in mS/m	70
Macro Parameters	mg/l
Total Dissolved Solids (as TDS) in mg/l	650
Magnesium (Mg)	100
Sodium (Na)	400
Sulphate (as SO ₄)	600
Chloride (Cl)	600
Nitrate (NO ₃)	10
Fluoride (F) in mg/l	1.5
Zinc (Zn)	5.0
Micro Parameters	µg/l
Arsenic (As)	300
Cadmium (Cd)	20
Copper (Cu)	1000
Cyanide (CN)	300
Iron (Fe)	1000
Lead (Pb)	100
Manganese (Mn)	1000
Mercury (Hg)	10
Phenolic compounds (Phenol)	10
Selenium (Se)	50

5. DELIVERABLES

Certificate of Analysis/ Results of Samples analysed with displaying, but not limited to, the analysed parameters, the method of analysis applied, unit of measure and the required limitation of each.

6. REPORTING

The service provider must submit the results of the water sample (surface and waste water) to the Environmental Specialist and the drinking water to the Occupational Hygienist via email.

7. 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).

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- 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.

8. LEGISLATIVE- AND REGULATORY REQUIREMENTS

- 8.1 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.
- 8.2 The successful or appointed service provider shall comply with the latest revisions of all Foskor COP's and SOP's (Compendium of Procedures, Standard Operating Procedures) (COP's, policies and procedures are available on request) and
 - a) Any other Foskor safety, health, quality and environmental policies and procedures deemed applicable by a Foskor representative.
 - b) All other Foskor procedures and policies applicable to the successful application of this contract.
- 8.3 The successful or appointed service provider shall comply with all Foskor's Environmental Specifications, Policies and Procedure and the national, provincial and local environmental legislation such as
 - a) National Environmental Management Act 107 of 1998 (NEMA)
 - b) National Environmental Management Waste Act 59 of 2008 (NEMWA) as amended.
 - c) 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)

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PRICING SCHEDULE

Item Nos	Description	No of sample per month	No of sample per year	Total cost Year 1	Total cost Year 2	Total cost Year3
1	Provision of water sample bottles	63	756			
2	Surface water samples chemical analysis	15	180			
3	Drinking water samples bacteriological analysis	30	360			
4	Drinking water sample chemical analysis	10	120			
5	Waste water samples chemical analysis	4	48			
6	Waste water samples bacteriological analysis	4	48			
	Other (specify)					
	a)					
	b)					
	c)					
	d)					
	e)					
	Total cost per year					
	Total Cost for the project					

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9. 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 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

10. EVALUATION 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- Years in business in conducting of laboratory services for water analysis..	- No experience = 0% 1- 3 years combined experience = 15% >4 years combined experience = 30%	30%	Award Letters / Confirmation letter from the companies indicating the type of work done and the dates or duration of the contract
2	List of 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% 1- 4 Projects = 15% >4 projects = 30%	30%	Award Letters / Confirmation letter from the companies indicating the type of work done and the dates or duration of the contract
3	Team Leader/ project specialist tertiary qualification in Chemistry or Analytical Chemistry	- No Degree =0% - Degree/ Diploma in Chemistry or Analytical Chemistry= 20%	20%	CV indicating number of years the individual was involved with similar type of projects and Copies of Certificate
4.	Understanding of the project- The brief methodology or proposal for conducting analytical chemical analysis of water samples	- Methodology not submitted = 0% - Methodology submitted = 20%	20%	Provide brief methodology or proposal
For the bid to be considered for shortlisting, the bidder needs to score 70% and above and comply to all mandatory requirements				

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Water Analysis- 3 years contract**

Compiled by

 504785

Michael Radzilani
Environmental Management Specialist

Approved by

PP  505275
31/7/2024

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

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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