

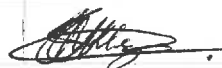
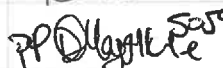
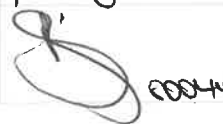
DESIGN, MANUFACTURE AND SUPPLY OF COLD HEAT EXCHANGER FOR SULPHURIC ACID -A PLANT

Tender no: FTP /25/LK

Cost Code:

Revision¹:

Revised date: 05 August 2025

NAME	TITLE	Empl. No	SIGNATURE	DATE
COMPILED - RECOMMENDATION				
Sandile S. Mkhize	Maintenance G.I.T	505461		07/08/2025
COMPREHENSION AND ACCEPTANCE				
The client warrants that he/she reviewed the Scope of Works and that this tender and related documents and that the scope of works comply to production requirements and the outcome of the work as agreed between parties.				
Siphiwe Ntuli	Sulphuric Acid Plant Maintenance Engineer	503497		07.08.2025
APPROVAL TO PROCEED				
Sifiso Majola	Senior Manager, Maintenance	15480		07/08/2025
Precious Buthelezi	Senior Manager Production	22171		11/08/2025
Charles Mavuso	Senior Manager, SHREQ	504688		11/08/2025
Sam Mbuyazi	General Manager, Acid Division	500441		11/08/2025

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Section A: INVITE AND TENDER INSTRUCTIONS

A.1 Invitation to tender

A.1.1 Tenderers are invited to submit a tender in accordance with this Tender Document.

The Works consists of the **DESIGN, MANUFACTURE AND SUPPLY OF COLD HEAT EXCHANGER FOR A-PLANT**

The tender Instructions are to be found in **Section A**.

The Contract Works Forms of Tender is stipulated in **Section B**.

The detailed Scope of Work and Specifications are to be found in **Section C**.

The Conditions of Contract are stipulated by **Foskor (Pty) Ltd, Procurement Department**.

A.1.2 At the time of tendering, any queries and/or doubts within the scope, specifications or drawings shall be referred to:

Designation

Buyer: Tenders and Contracts

For the attention of

Lisu Khumalo

Telephone

035 902 3278

Fax

035 797 3941

Cell no

Email

LisuK@foskor.co.za

A.2 Return of Tender Documents

A.2.1 One copy of this document, duly completed and signed by the Tenderer, shall be delivered in a plain sealed envelope, distinctly marked as follows:

TENDER

Tender No.

FTP /25/LK

Contract Title:

**Design, Manufacture and Supply
of Cold Heat Exchanger for A
Plant**

Closing Date & Time:

**The Manager Procurement
FOSKOR LIMITED
21 John Ross Parkway
Richards Bay**

A.2.2 Tenders shall be placed in the **Tender Box at Foskop Richards Bay Main Administration Reception** no later than **12h00 noon** on the closing date.

A.2.3 A tender sent by fax shall not be accepted.

- In case of Tenderers not being local, and not being able to hand deliver tender documents to the above-mentioned location, Tenderers may use an approved document courier for the purpose of delivering the tender document to Foskop (Pty) Ltd. This would be subject to auditable proof of dispatch from the Courier Company (including time and date of dispatch).
- Such proof shall be faxed and confirmed as addressed to Superintendent: Tenders and Contracts, FOSKOR (PTY) LTD, 21 John Ross Parkway, Richards Bay, facsimile number as indicated under item A.1.3 before the closing time and date of the tender.
- Foskop shall take no responsibility for lost courier documents – prior to opening of tenders - and onus rests on Tenderer to keep duplicate of Tender Submission.
- In this case the sealed envelope shall remain addressed as per paragraph A.2.1, and shall be placed in a sealed courier bag with the following street address delivery instructions:

FOSKOR (PTY) LIMITED - (TENDER BOX)
21 John Ross Parkway
Richards Bay
3900

A.2.4 Tenders will not be opened in public and under no circumstances will the price(s) at which any Contract was awarded be divulged to any person.

A.2.5 In the event that the Tenderer did not submit a tender or if his tender was unsuccessful, the Tenderer shall return the Enquiry Document and Drawings within **14 days** to the **Superintendent: Tenders** and **Contracts**

A.3 Site Inspection

An official Site inspection shall be held at the **Foskop, Richards Bay** site in order for the Tenderer to fully acquaint himself with prevailing site and works conditions. In so doing you are to ensure that you fully understand the context and extent of the works (refer B.5 – Site Inspection Certificate).

Date of Site Visit

Time of Site Visit

Meeting Venue

From:	To:
Report at Main Security Entrance	

Please wear the following protective clothing:

Overalls (Acid Proof),

Hard Hat

Safety Shoes

Safety Glasses

Yes

Yes

Yes

Yes

Hearing protection
Gloves
Gas respirator

Yes
Yes
Yes

IMPORTANT

- Please note that a Safety Induction is **MANDATORY** and all Tenderers to allow for at least **30 minutes** before the Site Meeting start, to complete the induction.

A.4 Examination and Completion of Documents

- A.4.1 The Tenderer shall examine all documents forming part of the Tender and submit his tender accordingly. All drawings, addendums, annexures received with the Tender documents must be returned with your company stamp and/or signature, as a comprehensive part of your Tender Submission. Failure to do so may result in disqualification from tender.

Tender in accordance with this format and submit documents as specified below.

- A.4.2 The Sections of this document shall not be separated in any way, nor shall any pages be detached therefrom.
- A.4.3 The Tenderers submission is to include all Financial and Contractual detail and be signed (by authorized person) and/or company-stamped together with tender submission.
- A.4.3.1 Cost Breakdown of the Works as per the Cost Schedule
- A.4.3.2 Initial Project Program of Works, Work Methodology, and Cash Flow (structured similarly to payment terms)
- A.4.3.3 Schedule of Similar Contracts Undertaken

A.5 Contract Documents Priority

The eventual Contract shall comprise the documents as stated in this tender document, your Tender submission by which you agree and the Foskop (Pty) Ltd Terms and Conditions, which shall be interpreted in accordance with the order of priority stated in the said Conditions.

A.6 Alterations by Tenderer

- A.6.1 Should the Tenderer propose any departures or modifications from the Conditions of Contract, Specifications, or to qualify his tender in any way, he/she shall set out his/her proposals clearly in the covering letter attached to this Tender with reference to the particular section of the document, failing which the tender will be deemed to be unqualified. Any proposed technical departures from Foskop (Pty) Ltd.'s Requirements or Specifications shall only be considered if submitted in writing together with a detailed motivation for such departures.
- A.6.2 The Tenderer shall include in respect of each proposed alteration the following:
- Reason for proposed exception.
 - Suggested re-wording.
 - Any effect on the tender price.
 - Any effect on the execution of the scope of supply.

d) Any effect on Foskor's overall program objectives.

If any of the above information is not supplied, the Tender may be regarded as non-compliant.

A.7 General

- A.7.1 Foskor (Pty) Ltd reserves the right to adjust arithmetical or obvious errors in the Tender. Such adjustments made by Foskor (Pty) Ltd will be communicated to the Tenderer prior to the acceptance of his Tender.
- A.7.2 The Tenderer (whether his Tender is accepted or not) shall treat the details of the Tender as private and confidential and no copies shall be made thereof without the permission of Foskor (Pty) Ltd.
- A.7.3 Foskor (Pty) Ltd is not bound to accept the lowest or any other Tender it may receive, nor to assign a reason for the rejection or acceptance of any Tender, and Foskor (Pty) Ltd has the right, after Tenders are opened, and before a Contract is awarded, to enter into negotiations and discussions with one or more Tenderers short-listed on a price, programmed or technical basis, with a view to the clarification, improvement or amendment of any particular Tender.
- A.7.4 All Tenderers tender at their own risk and Foskor (Pty) Ltd is not bound to accept any Tender and under no circumstances whatsoever will be responsible for any costs incurred by any Tenderer in compiling or submitting the tender.
- A.7.5 Furthermore, Foskor reserves the right to accept only a part of the Tender, with due communication and agreement of the Tenderer.
- A.7.6 The Tenderer is required to submit a 'bona fide' Tender, intended to be competitive and not to fix or adjust the amount of the Tender by or under or in accordance with any agreement or arrangement with any third party. The Tenderer is also obliged to ensure that it has not and will not at any time before the hour and date for the lodging of this Tender do any of the following acts:
- a) Communicate to any person the amount or approximate amount of the proposed Tender except where the disclosure, in confidence, of the amount of this Tender was necessary for the preparation of the Tender.
 - b) Enter into any agreement or arrangement with any third party that shall disqualify from or that Foskor shall refrain from using.
 - c) Commit any act or omission that would be contrary to the Maintenance and Promotion of Competition Act 96 of 1979 and notices and regulations published in terms of that Act,

Section B: FORMS OF TENDER TO BE SUBMITTED

B.1 Schedule of Rates or Summary of Bill of Quantities

	From Bill of Quantities – if applicable or →	qty	x rate =	ZAR
1.0 SUB TOTALS:				
1.00	Design & QMS of Cold Heat Exchanger			
1.01	Manufacture of Cold Heat Exchanger			
1.02	Supply of Cold Heat Exchanger			
	Sub Totals Sum (Excluding VAT)			
2.0	Add: VAT	15%		
3.0	Total Tender Sum (Including VAT)			

- B1.1 In the event of their being any obvious errors of pricing, extensions or additions in the priced Cost Schedule attached, we agree to their being corrected, and the contract amount altered accordingly.
- B1.2 We further undertake that this tender cannot be withdrawn or retracted for **90** (ninety) days from the closing date.
- B1.3 Notwithstanding that, this tender is submitted by invitation, it is clearly understood and agreed that there is no obligation upon Foskor to accept the lowest or any tender.
- B1.4 The tendered prices are fixed and firm for the duration of the contract, and unless otherwise agreed to in writing a 10% retention (held for 18 months, unless otherwise specified) shall be deducted on all payments made for the Liability Period as defined in B.2. This clause also refers to 'Handover' as specified in **B 2.1**
- B1.5 Unless or until a formal agreement is prepared and signed, this tender, shall serve as your written acceptance and constitute a binding contract between FOSKOR and Yourself.

Amount In Words:

Signed at on.....

Signature
For and on behalf of the Tenderer (duly authorized)

.....
Company Stamp

B.2 Initial Project Programmed of Works, Work Methodology and Cash Flow

(This is a workable schedule, and the Contractor is in no way obligated to these dates. An obligatory final programme will only be required once the tender is awarded)

Commencement Date (Guide: 2 weeks from tender close date)

Within 7 days from receipt of Purchase order.

Completion of Works/ Final Handover (Guide: Project duration)

6 Months from receipt of Purchase order.

TO BE SUBMITTED WITH THIS TENDER

The Tenderer shall submit with this Tender:

- 1 Initial programme (Bar Chart/Gantt Chart)
- 2 Project Milestones (Concise and separated from the Fabrication Program)

OTHER IMPORTANT NOTES

- **'Defects Liability Period'** shall be that period in force for Foskop to call upon the Contractor/Consultant to rectify at no cost to Foskop (Pty) Ltd any defects of workmanship, quality or practice; and shall remain in force **in parallel with the Retention Period** and any other duration agreed to.
- The Tenderer is to list and motivate any deviations in terms of Project Program and/or time allowed, and this is subject to approval by the Foskop (Pty) Ltd Engineer.
- It would be expected, in the event of critical work and/or work behind programme/schedule, should such be attributable to the Contractor, to make up the time and work and complete the work at no cost to Foskop (Pty) Ltd.
- The Tenderer shall within **7 (seven)** days of contract award submit a final detailed work methodology and programme, and the final work methodology shall be verified and approved by Foskop (Pty) Ltd.
- The Tenderer is welcome to propose alternatives work methodology or approach to work, that may be of mutual benefit. This would be submitted in the form of an Alternative (clearly marked), however the Tenderer is **still to submit a tender in the form specified** in this tender.
- The Tenderer shall submit a Work Breakdown Structure (WBS) and compile a programme (use MS Projects).
- If the Tenderer is partially or wholly responsible for the design or design drawings according to which construction is specified, any corrections to design/design drawings shall remain for the Tenderers account for a period of 6 months (or as otherwise agreed) after project completion. This is to ensure that poor design or inaccuracy of designs is rectified at no cost to Foskop.

B.2.1 Project Completion and Handover; Retention

Unless otherwise agreed, Project Completion (handover), shall be deemed to be from date of Foskop issuing a Project Complete/Handover Certificate to the Contractor. This should be expected to be received within seven (7) days from date of receipt by Foskop of the complete Data Pack in its acceptably certifiable form (refer Section C of this document, **Quality Control**). Once the project has

reached completion as defined by this scope, onus rests on the Tenderer to request from Foskop a Project Complete/Handover Certificate, which receipt shall define and signify the commencement of Retention Period.

B.2.2 Initial Program to be Submitted

The interim and final project completion dates, as indicated in the above table should be used as the guideline for the Tenderer to compile the detail project schedule.

After the contract agreement is accepted (by signature of an agreement or acceptance of a Purchase Order) the dates shall be fixed and shall be applicable to the penalty clause as per agreement.

ATTACH GANTT CHART AND/OR BAR CHART TO THIS PAGE

B.3 Schedule of Key Personnel on the Project

The Tenderer shall:

1. Complete schedule B.6.1 below concerning the Key Personnel on the project, indicating also if the person is employed by the Tenderer, a sub-contractor or temporary employed person.
2. Submit a project organogram showing the relationships and authority.

Key Personnel	Name and Surname	Employed, Sub-Contractor or Temp?	Years Related Experience
Project Manager/Owner			
Quality Manager			
Mechanical Engineer			
Mechanical Design Engineer			
Internal Quality Controller			
External Quality Controller			
Safety Officer			

These persons shall not be substituted without prior consultation with and approval from Foskop (Pty) Ltd.

Failure to submit this information at the time of tender could lead to disqualification of the tender.

B.4 Schedule of Similar Contract Undertaken

Please provide a list of work done on contract of which the Scope of Works that are similar to the one described in this document (or attach references).

[illegible]

Section C: SCOPE OF WORKS

C.1. Background, Present Situation and Proposed Solution

C.1.1 Background and Present Situation

The Cold Heat Exchanger is a vertical, radial, tubular Heat Exchanger With steel shell. The heat from the reaction from the 3rd Pass is exchanged by passing the gas through the shell side of the Cold Heat exchanger. The heat is transferred to the gas as it passes through the tube side of the Cold Heat Exchanger. The Cold heat exchanger is an integral part of a sulphuric acid plant operation.

Extensive repairs have been carried out on the inlet and outlet ducting to repair gas leaks. This heat exchanger has run its useful life and has plugged tubes due to leaks and blockages. Based on the Monsanto design the Cold Heat Exchanger last a maximum of 5 to 7 years. If operated after the designed lifespan there is a risk that it may lead to catastrophic failures.

Foskor intend to design and fabricate a new cold heat exchanger with the required standards and as per the latest heat exchanger design codes. The purpose of this scope is for redesign and fabrication of the cold heat exchanger, which will include design calculations, detailed design drawings and fabrication drawings. The Contractor shall furthermore install or assist to put in service, of the new Cold Heat Exchanger and complete the works with in-suite test and commissioning procedures.

C.3. Foskor Specifications

All work listed in this scope of work shall be completed in accordance with the specifications listed below.

Those specifically applicable to this Tender is **marked with "YES"**, however it does not exclude other specification listed or implied, and it remains the Tenderer's responsibility to ensure that work execution and tender prepared is in line and meets the requirements of all standards indicated or not.

Number	Title/Description	Version	Applicable
FM001	General Mechanical Specification	Latest	Yes
FM003	Welding of Fabricated Equipment	Latest	Yes
FM273	Fire Tube Waste Heat Boiler	Latest	Yes
FQ001	General Engineering Quality Requirements	Latest	Yes
FQ002	Non-Destructive Testing	Latest	Yes

Number	Title/Description	Version	Applicable
FY001	Design/Fabrication of Piping	Latest	Yes
GM1	General Mechanical	Latest	Yes
GM6	Engineering Drawing and Document requirements	Latest	Yes
GQ1	Quality Control procedure for Contractors	Latest	Yes
MC001	Color Coding Richards Bay	Latest	Yes
SS-000000-Q-001	General quality requirements	Latest	Yes

It is the responsibility of the Tenderer to be in possession of the latest specifications as listed above or implied in the execution of this project.

The Contractor is referred to the Specification mentioned for full descriptions of materials and methods referred to in these Bills of Quantities/Lump Sum documents, insofar as they apply.

The Contractor is advised to study the referred to specification before pricing Bills of Quantities/Lump Sum documents.

No claim whatsoever will be allowed in respect of errors in pricing due to brevity of description of items in the Bills of Quantities/Lump Sum documents which are fully described when read in conjunction with the relevant Preambles and/or Specifications.

Suppliers of materials and the like, whose quality systems apply with one or more of the SABS/SANS ISO 9001 Series should be used whenever possible in the absence of a particular SABS/SANS Specification Standard Mark.

The Contractor is hereby informed that where SABS/SANS Specifications are referred to in these Bills of Quantities/Lump Sums documents and Specifications thereto, then **ONLY** the Specification of Work Clauses will apply. The method of measurement and payment clauses will **NOT** apply to this Contract.

C.4. Project Requirements

The main purpose of this scope of work is for Design, Manufacture and Supply of Cold Heat Exchanger -Quantity 1 off. Together with:

- Technical Data Sheet.
- Test Certificate
- Inspection Certificate
- Non-Destructive Testing Report
- AIA Report

- CoC-Certificate of Conformity
- Crafting and Transportation if required
- Delivery Schedule
- Commissioning Certificate

C.5 Plant Data

All work listed in the document will be executed for and at FOSKOR (PTY) LTD, THE **RICHARDS BAY PLANT**.

C.6. Drawings and/or Equipment Manuals

The following drawings, data and/or manuals remain the property of Foskor (Pty) Ltd and shall be returned to Foskor (Pty) Ltd on completion of the work

All work listed in this Scope of Work shall be completed in accordance with the latest copies of drawings/specifications as listed above. It is the responsibility of the Tenderer to ensure that the

Tenderer has the latest copies of drawings/specifications as listed above for the execution of this project.

On completion of the project the Contractor must certify all documentation and drawings for correctness and conformance, specifying which standards and regulatory acts these conform to.

C.7 Scope of Work – General

- Redesign Cold heat exchanger of Foskor's Sulphuric Acid A Plant, The Supplier Shall Include all design calculations, Stress analysis and drawings in the design.
- The design Code should be ASME VIII Division 1 Latest Edition.
- Supply detailed design drawings for the Cold Heat Exchanger for Sulphuric Acid Plant.
- Proposal drawings shall be supplied as CAD files (AutoCAD and DFX format) and paper copies thereof reflecting the relevant information and details.
- All drawing works shall be presented on the Foskor Title Block template (Provided by the Foskor Drawing Office), with the contractor company's name in the drawn by block.
- To ensure compliance to a recognized quality management systems as guided by the design code, the contractor shall include a QCP, WPS, PQR, Weld MAP, Repair Procedures, Material Certificate and design Calculations. The QCP must be approved by AIA and Foskor before Commencement of any work and during construction.
- The contractor to submit the following information for approval of an AIA (Approved Inspection Authority) and Foskor Engineer, before starting fabrication:
 - Design Calculations,
 - Welding procedures,
 - General assembly drawings
 - Quality Control Plans,

- Material Certificates,
- Certification & Registrations of Constructors
- The contractor shall supply all the blank (Closing) Flanges, Studs, Nuts And Gaskets for all connections to do shop and field leak testing operations.
- The contractor shall be responsible for and ensure all shop Tests and AIA witnesses to the regulated construction code practices.
- The Contractor shall provide cranes/Support capability on the Cold Heat Exchanger where suitable (Lifting lugs and trunnions), and the Cold Heat Exchanger may be suitably cradled on strong, Sturdy transport/delivery cradle for the moving/transport purposes.
- The contractor Shall furthermore install or assist to put in service, of the new Cold Heat Exchanger and complete the works with 'in-suite' test and commissioning procedures or have qualified representatives on site to oversee/execute the test and commissioning and final handover. Should the contractor price this aspect separately, please indicate this clearly in tender response.
- **As a minimum the contractor must provide a nameplate which consists of the following information:**
 - Name of Manufacturer
 - Country of Origin
 - Year of Manufacture
 - Manufacturer's serial number
 - Name, Number & date of the Standard/Code of Design
 - Design gauge pressure in pascal
 - Maximum Permissible Operating Pressure in Pascal
 - Normal Operating Temperature
 - Shop leak Test gauge pressure in Pascal
 - Site leak test gauge pressure in Pascal
 - Capacity in cubic meters
- Mark of an Approved Inspection Authority
 - Note: Name plate to be attached to the body of the A-plant Cold Heat Exchanger in an accessible and easy to reach location.
 - The contractor to appoint an AIA to verify all the work prior and during fabrication of the Heat Exchanger.
 - A warranty of the fabrication of the job is to be granted by the contractor.
 - The Contractor shall supply own labour, Consumables, tools, supervision, specialized a equipment and manpower to fulfil the scope of the work.
 - The Contractor must compile a comprehensive bar chart that shows the execution duration of the scope.
 - Fabrication shall comply in all aspects, to the legislative requirements of the country of operation, the technical requirements, and documentation.
 - Final acceptance shall include the certification by and be compliant to Foskor agreed Approved Inspection Authority (AIA) inspector.
 - The contractor to submit a full data pack containing the following: Design Calculations, Quality Control Plans, Welding procedures and welding non-destructive testing and reports, Inspection reports and certificates, Material Certificates, General Assembly drawings and as built drawings.

- The Contractor shall provide written records of all testing, along with the data pack, to AIA inspector who shall then review and signoff the equipment for completeness and compliance if AIA inspector is fully satisfied that all construction requirements have be met.
- Engineering, design, fabrication and inspection shall comply with all the requirements of the following codes:
- ASME VIII DIV. 1 Latest Edition for Pressure Vessels and Heat Exchangers
- ASME IX Latest Edition for welding procedures/qualifications
- ASME V Latest Edition for Inspection requirements
- TEMA R Latest Edition for Shell and Tube Heat Exchangers

Design and Drawings

See Annexure A for details and drawing Number DA350262312601

Drawing Number	Description	Revision
DA350262312601	Cold Heat Exchanger	0

Design Technical Data

	Shell Side	Tube side
Design Pressure	42 kPa(g)	29 kPa(g)
Design Temperature	445°C	311°C
Operating Pressure	38 kPa(g)	25 kPa(g)
Operating Temperature	In 445°C / Out 269°C	In 80°C / Out 310°C
Pneumatic Test pressure	47 kPa(g)	31 kPa(g)
Design Code	Shell: ASME VIII Division 1 Latest Edition	
	Construction And Inspection: ASME VIII Division 1 Latest Edition	
	Tube Plate: TEMA Latest Edition	

Quality, Technical and Health and Safety Standards

- Safety- Occupational Health and Safety Act 85 of 1993
- NDE- Minimum level 2 NDE Qualified Technician to perform and Interpret Inspection and Reports. NDE Level 3 Qualified Technician to verify and approve Inspection procedure and reports.
- Material Grade – As specified by Design Code
- Design Code- RSA/CIF 81 98 ADD 96 & TEMA 'C' 8th Edition 99
- AIA registered with SANAS that will be used for the compliances and quality
- Clear method statement of how heat-tubes to be welded to tube-sheets and expanded into tube-sheet i.e. both.
- Conformity assessment of pressure equipment- SANS 347

- Welding Quality Standards- ISO 3834

C.8.1 Tender Deliverables

The following documentation

- Work Methodology that clearly indicate all the activities to be carried out.
- Contract delivery program clearly indicating the earliest delivery time (Gantt Chart or equivalent).
- Project Milestones.
- Company Profile (If supplier has not previously supplied similar product to Foskor Richards Bay).
- Reference Letter (Similar Contract Undertaken).
- Quality Control Plan (QCP).
- ISO 9001 Accreditation.
- Details of insurances, Warranties and guarantees.
- Price Lump sum at fixed cost and delivery date.

C.8.2 Site Conditions

It will be imperative for the successful Tenderer to liaise with the Foskor (Pty) Ltd.'s designated team leader (Foskor representative) to ensure safety whenever site access is required.

Full acid resistant PPE (personal protective equipment/clothing) must be used at all times.

Be cautious of Vehicle and machine working in the area at all times. This site produces hazardous chemicals such as phosphoric acid and sulphuric acid.

As it will be deemed that the prevailing conditions have been taken into account when tendering, no claims for extras arising from failure to observe all site conditions will be admitted.

C.8.3 Services which are known to exist on the site

The following services exist on the site:

- Water and air pipes.
- Phosphoric acid and Sulphuric acid pipes alongside the bridges
- Electrical cables and racking
- Steam
- Condensate
- Sewer line.
- Data/Instrumentation cables.

1. Foskop Supplied Services

Foskop (Pty) Ltd shall be responsible for:		Applicable:
1	Supply a copy of the relevant Foskop Procedure Specification(s).	Refer C.3
2	Supply a copy of reference drawings if required.	refer C.6
4	Provide access to electricity connection points Any connection and consumption will be monitored by Tenderer and verified by Foskop on defined intervals (usually at the beginning and end of contract)	YES
5	Provide access to potable water Connection and consumption would need to be monitored by Successful Tenderer (Contractor) and verified by Foskop on intervals (usually at the beginning and end of contract) defined by Foskop	N/A
6	Provide a suitable area for site establishment for Successful Tenderer (Contractor). - Successful Tenderer to formally in writing motivates, request and define the area and services it deems necessary for site establishment. - Foskop will at its own discretion (if request is approved) allocate a site establishment area, however Foskop can should it deem necessary retract or re-define its approval by giving reasonable notice to the successful Tenderer	ON REQUEST
7	Provide access to ablutions facilities. (Not change rooms) - Successful Tenderer (Contractor)'s workers to be fully dressed in required PPE when coming on site. - The successful Tenderer to ensure that its workers/subcontractors/ supplier that are making use of facilities, do so in an orderly and well-mannered way. - Successful Tenderer is not allowed to make use of Foskop's change room or tearoom facilities unless agreed to in writing. - The successful Tenderer might be called on to assist with the maintenance and cleaning of ablutions, should Foskop at its discretion be of the opinion that it be necessary. Cost associated with such cannot be claimed from Foskop (Pty) Ltd.	YES
8	Assist in issuing of work clearances and HIRA certificates.	YES

2. Successful Tenderer (Contractor) Responsibilities

The successful Tenderer (Contractor) shall be responsible for (inter alia):		Applicable:
1	Ensuring that all acceptance approvals as per the Quality Control Policy (QCP) are received before work is finally handed over.	YES
2	Design, Manufacture and supply of CHE	YES

Note that concerning above:

- i. No claims towards losses will be accommodated.
- ii. All items that the Successful Tenderer will bring to Foskor (Pty) Ltd, will be subjected to review and approval by Foskor (Pty) Ltd and shall conform to Foskor procedures.

C.8.4 Certification by Recognized Bodies

Only Tenderers registered with the relevant Board will be accepted and permitted to do work under this contract.

C.8.5 Services: Requirement for the termination, diversion, or maintenance

N/a

C.8.6 Nominated Sub-Tenderers

Should the tenderer anticipate using Subcontractors for any part of the scope, these must be specified below.

The following Sub-Tenderers are nominated:

Contractor	Concerning Works	Contact

C.8.7 Invoicing and Payment

Payment will be made by FOSKOR (Pty) Ltd, after approval (with consideration for the construction, completion, and defects corrections of the Works) by the FOSKOR (Pty) Ltd.'s Project Representative

(i.e., Engineer, Project Supervisor) of the submitted Payment Certificate to the Tenderer within **30 (thirty)** days from the date of the Tenderers approved statement.

C.8.8 Standing Time

N/a

C.8.9 Progress of Works

The Contractor shall take all reasonable steps to ensure that they expedite progress so as to complete the works by the due completion date/project plan.

C.8.10 Penalty

If the Contractor, by the Due Completion Date, fails to complete the Works to the extent which entitles him to receive a Certificate of Practical Completion, the Contractor shall be liable to Foskor (Pty) Ltd for an amount of **0.05% for every Calendar Day that the works is late or such portion of the contract price as is associated with that part of the Works.**

The imposing of such penalty shall not relieve the Contractor from the obligation to complete the Works or from his obligations and liabilities under the Contract.

C.8.11. Extension of Time for Completion

The whole works shall be completed within the time agreed upon.

However, any extension of time for the completion of the works or portion thereof, Shall be addressed for Foskor, with reasonable cause or effect duly submitted.

C.8.12 Cancellation of the Contract by Foskor (Pty) Ltd

If:

- (a)
 - (i) The estate of the Contractor shall be sequestrated (provisionally or finally), or
 - (ii) The Contractor shall publish a notice of surrender of his estate as insolvent, or
 - (iii) The Contractor, being a company or a close corporation, shall go into liquidation (provisionally or finally), or
 - (iv) The Contractor shall assign the Contract without the consent in writing of Foskor (Pty) Ltd having first been obtained, or
 - (v) The Contractor shall enter into a compromise with the general body of his creditors, or
 - (vi) The Contractor shall have an execution levied on his goods, or
- (b) the Foskor (Pty) Ltd Project Representative shall certify in writing to Foskor (Pty) Ltd, and to the Contractor/Consultant, with specific reference to this Clause, that in his opinion the Contractor/Consultant:
 - (i) has abandoned or repudiated the Contract, or

- (ii) has, without reasonable excuse, failed to commence the Works in terms of the time allowed and agreed to, or
 - (iii) has suspended the progress of the Works without due cause, or
 - (iv) has failed to proceed with the Works with due diligence, or
 - (vi) is not executing the Works in accordance with the Contract, or
 - (vii) has, without the approval of the Foskor (Pty) Ltd Project Representative, subcontracted any part of the Contract, or
 - (viii) has failed to provide the Surety ship, Professional Indemnity within the time stipulated and for 14 days after receiving a written notice from the Foskor (Pty) Ltd Project Representative, referring specifically to the default concerned and to this Clause, failed to remedy the default,
- (c) Foskor (Pty) Ltd may, by written notice to the Contractor, terminate the Contract and withhold any payments due until further notice.

C.8.13 Urgent remedial work

All designs changes or remedial action must be communicated to the Foskor Engineer or the authorized Foskor Designate. Approval of such must be sought and received as early as not to impose undue costs and delays. Should there however be remedial work necessary, the Contractor shall, upon approval from the Foskor Engineer/Designate, effect these with care, accuracy, and speed, so as not to impose undue extension of time and /or cost.

If any work as done by Foskor (Pty) Ltd is work which the Contractor was liable to do at his own expense under the Contract, all costs incurred by Foskor (Pty) Ltd in so doing shall be determined by Foskor (Pty) Ltd or its agent and shall on demand be paid by the Contractor to Foskor (Pty) Ltd.

C.9 Foskor Safety Documents to be submitted, Environmental and Site Management**C.9.1 SHREQ Requirements**

The following are safety requirements that must be adhered to:

A safety plan for the work to be done by the contractor.

The contractor must appoint a qualified Safety Officer with at least Diploma in Safety Management or SAMTRAC or both either on a full time or part-time basis to conduct the following responsibilities:

- Conducts and submit audits monthly.
- Conduct and submit inspections monthly.
- Compile and submit safety monthly report to Safety Department.
- Perform safety talks and awareness training and submit evidence to Foskor.
- Visibility on Site.
- Conduct inspections on PPE and provide evidence to Foskor.
- Continuously update Safety File.
- A contractor to submit a comprehensive task-based risk assessment that has acknowledged the Foskor baseline risk assessment and method statement.

- A contractor to appoint a full-time Supervisor to manage and supervise all the activities of his/her employer.
- All new work activities must have scope of work and communicated to Safety Department before starting with the work with exception of emergency breakdowns.
- All maintenance emergency works and consultants are exempted from the above-mentioned safety requirements.

NB

A contractor that has been awarded work must register with HSEC Online, which is a contractor management system for Foskor Acid Division where all contractors are required to submit their safety files.

C.9.2 Environmental Management Specifications

In order to ensure that the construction works is designed for an environmentally sensitive area, strict compliance to the Environmental Management Plan (EMP) guidelines may be requested after appointment of the contractor.

The EMP shall be part of the terms of reference for all contractors/consultants, sub-contractors/consultants, and suppliers.

A copy of the EMP requirements is available from Foskor (Pty) Ltd SHREQ department.

All MSDS's to be submitted to Foskor (Pty) Ltd.

Waste disposal needs to comply to Foskor (Pty) Ltd Waste Management Plan.

C.10 OHSA 1993 Health and Safety Specification

This specification covers the health and safety requirements to be met by the successful Tenderer (Contractor) to ensure a continued safe and healthy environment for all workers, employees, and subcontractors/consultants and for all other persons entering the site of works.

This specification shall be read with the Occupational Health and Safety Act (Act No 85 and amendment Act No 181) 1993, and the corresponding Construction Regulations 2003, and all other safety codes and specifications referred to in the said Construction regulations.

C.10.1. Working on Site-Health and Safety Induction

The successful Tenderer (Contractor) shall ensure that all employees under his control, including the subcontractors/consultants and their employees, undergo a health and safety induction training course by a Foskor competent person before entering site.

- a. The Contractor on entering site, must always wear Foskor minimum required PPE namely safety glasses, acid resistant overalls, safety harnesses (on heights), safety boots or steel cap gumboots, ear protection and **gas masks (Half mask double filter – screw type with filter type A1B1E1K1 – North Safety Product or similar approved product) and goggles (Uvex ultra vision – W1663459B – DIN CE 0196) preferably in a pouch.** Should a Contractor be found on site without the above-mentioned safety

- clothing, he will be removed from site and will not be allowed to return. FFP3 dust mask fitted with an exhalation valve must be used when working in dust in on the B&D Store.
- b. The Contractor must take all necessary safety precautions when working on site.
 - c. A complete safety file is to be submitted to Foskor (Pty) Ltd Safety Department before any work commences on site.
 - d. The Contractor's vehicle when entering the plant must always have rotating range lights on.

MANDATORY AS ENVISAGED BY SECTION 37(2) OF THE ACT

By the submission of a tender, any tenderer will, if awarded the contract to which this tender document relates, be deemed to be the mandatory as envisaged by Section 37 (2) of the the Occupational Health & Safety Act. (Act 85 of 1993)..

C.11. Applicable General Conditions of Contract

Unless expressly otherwise indicated, Foskor General Conditions of Contract and the FIDIC terms of Contract would apply and is available from the Manager Procurement Foskor Richards Bay.

C.12. Quality Management

The successful Tenderer is to adhere to a Quality Management System and specifications incorporated in the relevant fabrication engineering and construction code.

C.12.1 Quality Control:

- i. A detailed QCP (Quality Control Plan) shall be submitted within 3 days of contract award.
- ii. Quality of work must be always monitored and controlled at a high level. The Contractor shall show proof of this by providing and maintaining a Quality Manufacturing Data-pack (QMD). The QMD file may contain work Method Statements, clearances, daily site diaries, material certificates, AIA (Approved Inspection Authority) certifications, weld certificates, Welder certifications, weld-rod batch no.s and product codes, concessions granted, design drawings and "As-Built" drawings, design deviations/notes/drawings and manufacturing specifications.
- iii. At each hold and witness point all work shall be suspended until the specified inspection has been completed and the QCP updated and signed accordingly by Foskor (Pty) Ltd or its representative.
- iv. It shall be the responsibility of the successful Tenderer (Contractor) to give Foskor (pty) Ltd timely notice of hold and witness points requiring their intervention.
- v. The QCP must be reviewed/agreed by Foskor before commencement of any work.

Section D- Project Schedule

The final project completion dates are tentative until further notice. Indicated in the table below in a generic program that could be used as a guideline for the contractor to compile the baseline project schedule.

No.	Activity	Completion Date
1.	Appointment of Design Engineer	
2.	Kick of meeting to discuss program, deliverables and concept design	
3.	Provision/ transmittal of available information. (Plant lay-out, existing piping and attachments); operating parameters, etc	
4.	Survey and verify site, surrounds, interfaces, measurements, concept design.	
5.	Review and approval of design with client	
6.	Incorporate feedback from client to detailed design	
7.	Prepare 2 nd draft / final draft design and fabrication drawings	
8.	Review and approval of detailed design by verification engineer	
9.	Prepare bill of material	
10.	Submit detailed design calculations, drawings and Bill of material	
11.	Appoint approved contractor/Supplier/Inspection authority	
12.	Prepare and sign-off the Quality Control Plan	
13.	Shop Fabrication Work	
14.	Statutory construction inspection and testing	
15.	Equipment delivery and installation	
16.	Site Statutory Inspection and Tests	
17.	Final Handover	

13 Technical Evaluation Criteria for This Tender which excludes Commercial Evaluation:

Design, Manufacture and Supply of Cold Heat Exchanger for Sulphuric Acid A Plant			
Mandatory Requirements: Bid submission not meeting these requirements will result in bid being disqualified.			
1	Submission of the CIDB 6ME Registration Certificate for the Principal Contractor - Proof of the Certificate is required		
2	Submission of ECSA Registered Pr. Engineer/Technologist Certificate as Competent Person to sign off on all designs - Proof of the Certificate is required		
3	Submission of Certified and SANAS accredited AIA - Proof of the Certificate is required		
4	Submission of Certified and Registered SAIW Welding and Fabrication Inspector Level 2 Inspector - Proof of the Certificate is required		
5	Submission of Qualified Safety Officer with at least a Diploma in Safety Management or SAMTRAC or both. Registration with SACPMMP is a must - Proof of the Certificate is required		
6	Submission of proof for Corrosion Protection – Sigma Paint Applicator certificated by Sigma - Proof of the Certificate is required		
7	Submission of proof for ISO3834 Certification / SAIW Registration for ISO3834 - Proof of the Certificate is required		
Technical Evaluation Criteria for this Tender which excludes Commercial Evaluation:			
No	Technical Criteria Description	% Contribution	Proof / documents to be submitted
1	Experience & Team Competence		
a)	Company - Previous Heat Exchanger Designs Scoring: Less (<) than 1 year experience = 0 ≥ 1 year < 5 years = 5% ≥ 5 years < 10 years = 10% > 10 years = 15%	15%	Give reference list of projects (in a tabular format), with values and client contact numbers for verification.
b)	Company - Previous Steel Construction and Refurbishment Scoring: Less than 10M Vessel Diameter = 10%; 10M Diameter & Above Vessel = 25%	25%	Give reference list of projects (in a tabular format), tank sizes, project values and client contact numbers for verification.
2	Company Delivery Capacity & Reliability		
a)	Company Delivery Times - Execute construction according to a pre-approved WBS / Project Schedule/ Milestones/ Bar Chart/Gantt Chart Scoring: No Schedule = 0 %; 3 to 6 Months = 15%;	15%	Are the delivery times/ project programme and duration acceptable? Milestone breakdown provided. Refer to B.2 table on page 9 in Tender Document for 6 months duration of Project.
3	Scope of Work Compliance		
a)	Adherence to Scope of Work and its Specifications, and especially the ASME VIII Standard. Scoring: No work methodology = 0 %; Full scope adherent well documented methodology = 15%	15%	Provide and submit relevant preliminary high level Work Methodology that considers the construction of the acid storage tank and it highlights essential details.
b)	Provide Quality Control Plan Scoring: No quality control plan = 0 %; Comprehensive quality control plan = 15%	15%	Provide and submit quality control plan relevant to the work methodology.
c)	Provide Safety Management Plan Scoring: No Safety Management Plan = 0 %; Comprehensive, well-defined safety plan = 15%	15%	Provide and submit Safety Management Plan that includes Health and safety policies, Safety training records, Incident reporting and emergency plans.
Total Technical Score		100%	
Note: 70% will be minimum required to be considered for this tender			

