SCOPE OF WORK

Contents

1 INTRODUCTION

1.1 GENERAL

The Petroleum Oil and Gas Corporation of South Africa (PetroSA), is a wholly state-owned Company of the Government of South Africa and registered as a commercial entity under the South African law. It is a subsidiary of CEF SOC Limited (CEF). The Company has operated the GTLR refinery located in Mosselbay using indigenous natural gas & combination of imported and indigenous condensate as primary feedstock.

The approved COMPANY strategy and corporate plan envisage that the COMPANY will in the short to medium term undertake several critical Midstream and downstream projects to stabilize and ultimately grow the COMPANY. In parallel, efforts are underway to monetize the remaining feedstock, increase reserves and secure alternative feedstock to the refinery.

The COMPANY intends to appoint a CONTRACTOR who will provide services to safely demolish the tanks described in to scope of work. COMPANY shall reserve the right to appoint a suitable or combination of the preferred CONTRACTOR with the required experience in the demolition of the Oil & Gas/Petrochemical sector with proven experience in all project phases.

1.2 PURPOSES OF THE DOCUMENT

This document defines the Services to be performed by the CONTRACTOR to provide services to demolish tanks and associated piping. It identifies all the main and key activities to be undertaken by the CONTRACTOR in fulfilment of its obligation hereunder.

1.3 DEFINITION OF TERMS

For the purposes of this Scope of Work, the following definitions shall apply:

DEFINITION	DESCRIPTION
COMPANY	Petroleum Oil and Gas Corporation of South Africa SOC Limited

CONTRACTOR	The EPCM CONTRACTOR
CTR	Cost Time and Resources
EPCM	Engineering Procurement and Construction Management
FEED	Front End Engineering Design
HAZOP	Hazard & Operability Study
HSEQ	Health Safety Environmental and Quality
HZID	Hazard Identification Risk Assessment
IVB	Independent Verification Body
RBI	Risk-Based Inspection
SIL	System Integrity Level

2 SERVICES OVERVIEW

2.1 Executive Summary: This document outlines the scope of work for the safe demolition of nine petroleum tanks located at Voorbaai tank farm. The primary objective of this project is to ensure the safe and environmentally responsible removal of the tanks, while minimizing risks to personnel, the surrounding community, and the environment.

2.2 Project Objectives: The main objectives of this project are:

- Demolish nine petroleum tanks and associated piping in compliance with all safety, environmental, and regulatory standards.
- Minimize disruption to nearby operations and local communities.
- Safely manage hazardous materials and waste generated during the demolition.
- Restore the site to a condition suitable for future use, as per the agreed-upon plan.

2.3 This Scope of Work pertains to the following equipment that has been out of service for extended period and poses a safety risk:

	Equipment Number	Description / Scope	Capacity (m^3)	Diameter (m)	Type
1	93-TK417	98 Oct gasoline Tank	2210	15.24	Floating roof
2	93-TK418	93 Oct gasoline Tank	4338	21.33	Floating roof
3	93-TK419	D.G.O. Tank	2210	15.24	Coned roof
4	93-TK420	D.G.O. Tank	1085	10.66	Coned roof
5	93-TK421	Illumination Tank	1084	10.66	Coned roof
6	93-TK114	93 Oct gasoline Tank	80	2.84	Horizontal
7	93-TK156	93 Oct gasoline Tank	80	2.85	Horizontal
8	93-TK285	98 Oct gasoline Tank	80	2.85	Horizontal
9	93-TK454	Superpower kero Tank	80	2.85	Horizontal

2.4 Project Scope:

- The demolition of nine tanks listed above, including all associated piping, valves, and structures, within the bunded area. The waste material shall be stacked in the designated laydown area, adjacent to the bunded area.
- The scope of work for this project includes, but is not limited to, the following activities:
- Detailed site assessment: Conduct a thorough assessment of the site, tanks, and surrounding areas to identify potential hazards, risks, and necessary safety measures.
- Permitting and regulatory compliance: Obtain all necessary permits and ensure compliance with regulations throughout the demolition process.
- Hazardous material identification and management: Identify, safely handle, and dispose of hazardous materials (e.g., residual petroleum, chemicals, asbestos) in accordance with relevant regulations.
- Structural engineering assessment: Conduct a structural analysis of the tanks to determine the most suitable demolition methods, including controlled implosion, dismantling, or a combination thereof.
- Safety protocols: Develop and implement comprehensive safety protocols to protect personnel, nearby residents, and the environment during the demolition activities.

- Environmental protection: Implement measures to prevent contamination of soil, water, and air during the demolition and waste removal process.
- Waste management: Properly manage and dispose of waste generated during the demolition, adhering to waste disposal regulations.
- Decontamination and site restoration: Thoroughly decontaminate the site after demolition and restore the area as per the agreed-upon plan, including grading, landscaping, and any required site modifications.
- Public communication: Develop a communication plan to inform local communities, stakeholders, and relevant authorities about the demolition schedule, safety measures, and potential impacts.
- Project documentation: Maintain detailed records of all activities, including safety protocols, waste disposal records, and any deviations from the original plan.
- Risk Management: A comprehensive risk assessment will be conducted to identify potential risks and mitigation strategies. Regular monitoring and adjustment of safety measures will be undertaken to address changing conditions.

2.5 Timeline: The project is estimated completion from date of Purchase Order must accompany your tender / bid.

2.6 Take note of the following PetroSA requirements to conduct work on site that will affect your estimation of cost to complete this work:

- All personnel require badging.
- All personnel require Medical clearance.
- All personnel require Training – permit to work, working at heights and confined space entry.
- Contractor to provide their own DB board for tools.
- Contractor also to submit manpower loading and org structure (PM and Planner, Sub contractors etc.)

- Cellphone permits / Laptop permits / Telephone requirements / Internet point.
- Vehicle access permits
- Hours of work must be managed within the Basic Conditions of Employment Act No. 75.1997 to achieve the project end date.
- Other requirements to bear in mind:
- Letter of Good Standing from the Compensation Commissioner
- Public Liability
- Professional Indemnity
- Safety, Health & Environmental Policy signed by CEO.
- SHE Procedures pertaining to tasks.
- Job Safety Analysis
- Safe Working Procedures
- Near Hits / Hazard Reporting
- Risk Assessment per job task / loading / cutting / material handling / processing of scrap metals / hot-work.
- Competency training of personnel
- Load test certificates on grab / lifting equipment vehicles.
- Roadworthy certificates of trucks / vehicles
- Emergency Preparedness Program
- Record / Register for Personnel Protective Equipment / Clothing (PPE&I) with company logo
- Flammable retardant overalls

2.7 Deliverables: The following deliverables are expected as part of the project:

- Site assessment report
- Demolition plan detailing methods and procedures
- Hazardous material management plan
- Safety protocols and procedures documentation
- Waste management and disposal records
- Site restoration and decontamination report
- Final project report including lessons learned

2.8 Exclusions:

- The disposal of all waste material in accordance with National Environmental Management: Waste Act, 2008 requirements.
- PetroSA supplies lighting.
- PetroSA supplies power at 220V and 525V at the nearest available point at the site.
- PetroSA Production Supervisor – only one person for contractor to liaise with
- The tank is to be cleaned and made hydrocarbon free for hot work by Operations – the cleanliness to be specified / agreed between Contractor and PetroSA Operations (gas tested)
- Toilet and mess facilities on site may be used, depending on the number of personnel on site.
- Instrumentation and electrical connections removal by others.
- PetroSA will provide safety standby personnel for the duration of the work.
- PetroSA to ensure ventilation in the tank – air movers, if required.

3 ENGINEERING NOTES

3.1 The code of design for the tanks is API 650, built in 1957.

3.2 As per, 29 CFR 1926.850, Safety, and health regulations for construction an engineering survey must be conducted by a Competent person to assess and safely demolish these structures. The demolition method must be submitted to PetroSA for review.

3.3 All welding shall be performed in accordance with AWS D1.1 for any reinforcing required to safely demolish the tanks.

3.4 Any reference in the PetroSA Specifications and Standards to:

- Mossref and/or Mossgas shall mean PetroSA.
- The MOS Act (Act 6 of 1983) shall mean the Mine, Health, and Safety Act (Act 29 of 1996)

4 QUALITY MANAGEMENT

4.1 All work shall be subjected to the QA/QC requirements and procedures defined by the Code, PetroSA Specifications & Procedures, and ISO 9000 series. For QA/QC documentation requirements see attached VDRL.

4.2 PetroSA shall appoint the Authorised Inspection Authority in accordance with SANS 10227-2012.

All work shall be performed in accordance with best industry standards. The work standards shall meet all applicable criteria complying with the high local and international oil and gas industry standards/ requirements currently in force or coming into force during the term of the Contract.

All aspects of the work shall be made available for detailed auditing by the COMPANY or an authorised representative of the COMPANY.

5 CHANGES TO THE SCOPE OF SERVICES

The scope of the Services shall be subject to changes by additions, deletions or revisions thereto by the COMPANY. The CONTRACTOR shall be advised of any such changes by written notification from the COMPANY describing the change. The CONTRACTOR shall promptly perform and strictly comply with each such change when so instructed by the COMPANY. Any extra services resulting from such changes will be charged at the CONTRACTOR's normal or agreed rates.

DOCUMENT TITLE	DOCUMENT NUMBER	REMARKS	REV
1. DRAWINGS & DATASHEETS			
93-TK-417			
Frame detail of floating roof of 50-foot diameter tank	93TK417D002	Included	Rev 01

Detail of top and bottom decking for floating roof	93TK417D003	Included	Rev 01
Layout of Bottom Plates	93TK417D005	Included	Rev 01
Roof supports	93TK417D006	Included	Rev 01
Location of fittings	93TK417D007	Included	Rev 01
Details of wind girder and curb angle	93TK417D008	Included	Rev 01
Wind girder and Top curb to API spec	93TK417D010	Included	Rev 01
Top part of center roof support	93TK417D011	Included	Rev 01
Standard sealing ring	93TK417D012	Included	Rev 01
Rubber sealing ring details	93TK417D013	Included	Rev 01
Layout of tank shell plates	93TK417D043	Included	Rev 01
93-TK-418			
Automatic tank gauge connection for floating roof tank	93TK418D001	Included	Rev 01
24-inch diameter sump for water draw off	93TK418D002	Included	Rev 00
93-TK-419			
Standard column base for cone roof tanks	93TK419D015	Included	Rev 01
Layout of bottom plates	93TK419D020	Included	Rev 01
Material list of cone roof tank	93TK419D022	Included	Rev 01
Layout of roof plates	93TK419D023	Included	Rev 01
GA and details of roof structure	93TK419D026	Included	Rev 01
Details of roof structure	93TK419D027	Included	Rev 01
Bottom part of roof supporting column	93TK419D028	Included	Rev 01
Layout of shell plates	93TK419D030	Included	Rev 01
GA of helical staircase	93TK419D031	Included	Rev 01
Layout of bottom plates	93TK419D032	Included	Rev 01
Layout of shell plates	93TK419D033	Included	Rev 01
93-TK-420			
Material list for cone roof tank	93TK420D001	Included	Rev 01
GA of helical stairway	93TK420D005	Included	Rev 01
Roof plates layout	93TK420D006	Included	Rev 01
GA of roof structure 35 foot-diameter tank	93TK420D009	Included	Rev 01

Details of roof construction for 35 foot-diameter	93TK420D011	Included	Rev 01
Bottom part of center roof support column	93TK420D012	Included	Rev 01
Top part of center roof support column	93TK420D013	Included	Rev 01
Layout of shell plates	93TK420D026	Included	Rev 01
Layout of bottom plates standard welded	93TK420D029	Included	Rev 01
GA of swing pipe	93TK420D030	Included	Rev 01
93-TK-421			
Material list for cone roof tank	93TK421D001	Included	Rev 01
GA of helical stairway	93TK421D005	Included	Rev 01
Layout of roof plates	93TK421D006	Included	Rev 01
GA of roof structure	93TK421D009	Included	Rev 01
Details of roof construction	93TK421D011	Included	Rev 01
Bottom part of roof supporting column	93TK421D012	Included	Rev 01
Top part of roof supporting column	93TK421D013	Included	Rev 01
24-inch diameter shell manhole	93TK421D014	Included	Rev 01
24-inch diameter roof manhole	93TK421D015	Included	Rev 01
Layout of shell plates	93TK421D026	Included	Rev 01
Layout of bottom plates	93TK421D029	Included	Rev 01
2. SPECIFICATIONS			
3. PROCEDURES			
Contractor QA Requirements	PR/MTS/ISM/AIA/003	*	Rev 00
Engineering Contractor Drawing Supply	PR/MRE/END/DRW/001	*	Rev 00
* = supplied upon request			

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