



ANNEXURE A

SCOPE OF WORK

ENQUIRY NO: CTT25652

DESCRIPTION: SERVICING OF SPM AND CBM FOR PetroSA IN MOSSEL BAY

1. SCOPE OF WORK

1.1 SERVICES

The Scope of Services outlines the minimum requirements for the operation and maintenance of a Marine Loading Facility (MLF) comprising a Single Point Mooring (SPM) approximately 3km offshore and a Conventional Buoy Mooring (CBM) approximately 2 km offshore.

1.2 DEFINITIONS

In this Agreement and all documents relating thereto the following words and phrases shall have the meaning assigned to them below:

“OMM” : the Operations & Maintenance Manual.

“NPA of SA” : the Mossel Bay port authority, being National Port Authority of South Africa, a division of Transnet Limited.

“SAMSA” : South African Maritime Safety Authority

“Nm” : Nautical Miles

“DWT” : Dead Weight Tonnage

“MLF” : the Marine Loading Facility comprising the SPM, the CBM, and their ancillary equipment such as valves, flexible hoses, rigid pipeline(s), PLEMs, but excluding the CBM’s buoys and mooring arrangement.

“SPM” : the Single Point Mooring located seaward of the Voorbaai area near Mossel Bay.

- “CBM” : the Conventional Buoy Mooring located seaward of the Voorbaai area near Mossel Bay.
- “PLEM” : Pipeline End Manifold.
- “BTV” : the Buoy Tender Vessel supplied by the Supplier in terms of the Scope of Services.
- “OPM” : the Operations Procedures Manual.

1.3 SAFETY EQUIPMENT AND APPAREL

The Supplier shall ensure that all its personnel engaged in the performance of the Services are provided with all the necessary safety equipment/apparel in good condition for the safe execution of the Services.

All safety equipment/apparel shall bear the SABS mark and be approved by the PetroSA Safety Department.

1.4 ACCOMMODATION & TRANSPORT

No accommodation or transport will be provided by PetroSA. The Supplier shall be responsible for making its own arrangements regarding accommodation and meals and will be responsible for providing transport to its Personnel to and from the PetroSA Works. No costs will be refunded by PetroSA.

1.5. GENERAL DESCRIPTION OF MLF

1.5.1 SPM

The SPM consists of a mooring buoy, chain and anchor system, mooring assemblies and floating and subsea hoses. It is constructed of steel and is approximately 10m diameter x 4m high and painted yellow. The buoy keeps the system afloat and buoyancy is accomplished by watertight compartments located in the outer body. A turntable is mounted on top of the buoy and carries the fluid piping which connects to the fluid swivel assembly located in the centre of the buoy.

Tankers are moored to the buoy via a mooring hawser attached to the multiple product distribution unit (MPDU).

The floating hoses connect the overboard pipework of the MPDU with the manifold of the moored tanker.

The subsea hoses form the connection between the fluid swivel assembly on the buoy and the subsea PLEM.

1.5.2 CBM

The CBM consists of a T-shaped PLEM connected to a rigid 10" pipeline via a reducer to the PLEM flanges which are standard 8", 8 hole, 150lb ASA connections.

A yellow spar buoy marks the approximate centre of the PLEM and a diamond shaped buoy is attached by lifting chain to the end of the subsea hose.

The hose string is approximately 61m long with a butterfly valve at the hose end, together with a spool piece to which the pressure gauge and sample cock are connected. The M/F connection is 8", 8 hole, 150lb ASA.

A second PLEM has been installed on the same mooring and is operational.

1.6 SCOPE OF SUPPLY- GENERAL OVERVIEW

Approximately **72** tanker berthings are expected per annum, which will not be exceeded by more than 10 (**6 vessels a month on the scorecard**).

The following Services are required to be performed by the Supplier in connection with the tanker berthings and the MLF:

- The efficient turnaround of all tankers calling at the MLF, with particular emphasis on safety, environmental protection and expeditious turnaround times.

The Supplier is expected to have an experienced Loading Master as well as a mooring and/or maintenance and/or diving team/s made up of personnel with previous experience in the oil industry and fully trained in all aspects of safety in a hazardous environment.

The maintenance/mooring team will be responsible for the following:

- Preparing the berth in advance of a tanker's arrival. The handling of hawsers on and off the tanker. Assisting with hose handling, checking subsea PLEM valves, etc. Maintaining a 24 hour safety patrol in co-operation with the Loading Master.
- Maintenance work as per IMODCO schedule.
- Keeping a suitable BTV on standby for assisting the tanker during changes in wind and tide direction. PetroSA will not provide a substitute BTV vessel; it is the responsibility of the contractor to ensure the BTV is in service and available for the duration of the contract period.
- Inspection, maintenance and testing of the MLF, including the management thereof and procurement of spares.

- Dealing with any product spills into the sea.
- Administration and keeping of detailed records and provision of reports relating to the Services.

From time-to-time tankers are berthed at the SPM and CBM simultaneously and the Supplier is expected to have access to an additional loading master and mooring team.

1.6.1 DETAILED MAINTENANCE SCOPE - CBM

Routine maintenance for CBM is as per table 6.1 below. All reports for maintenance work to be sent to PetroSA Responsible Area Engineer no later than 2nd day of every month. All monthly reports to include daily operations report for review by PetroSA Responsible Area Engineer.

TABLE 1.6.1 : CBM - INSPECTION AND MAINTENANCE SCHEDULE (IMODCO)

ITEM	WEEKLY & PRE-BERTH	MONTHLY	ANNUALLY	INSPECTION AS REQUIRED
CBM BUOYAGE				
MOORING BUOY				
Buoy Location	Visual	N/A	N/A	Annual change out
Buoy Body	Visual	Visual	Deck-Clean Inspect	
Connections and Pins	N/A	N/A	Deck-Visual	
Inspection Cover	N/A	N/A	Deck-Inspect	
Freeboard	Visual	Visual	N/A	
Coating	N/A	N/A	Deck-Inspect	
Anodes	N/A	N/A	Deck-Inspect	
Hooks	Visual	Visual	Deck-Inspect	
Trip line tail and Snap shackle	Visual	Visual	Deck-Inspect	
Crash rail	Visual	Visual	Deck-Inspect	
Blow-up/down Valve	Visual	Visual	Deck-Change	
MARKER BUOY				
Buoy Location	Visual	Visual	N/A	
Buoy Body	Visual	Visual	Deck-Clean& Inspect	

Inspection Cover	Visual	Visual	Deck-Inspect	
Anodes	N/A	N/A	Deck-Inspect	
PENCIL BUOY				
Buoy Location	Visual	Visual	N/A	
Buoy Body	Visual	Visual	Dive-Clean, Dive-Wear down	5 Year refurbishment
Chain Pennant	N/A	N/A	Dive-Clean, Dive-Wear down	5 Year replacement
Mooring Block	N/A	N/A	Dive-Visual	
CHAIN SYSTEM				
Mooring Buoy Connection	N/A	N/A	Deck-Inspect	
Mooring Chain	N/A	N/A	Deck-Wear down	
Marker Chain	N/A	N/A	Deck-Wear down	
Swivel	N/A	N/A	Deck-Wear down	
CBM PIPING				
SS Hose Pick up buoy	Visual	Deck-Visual	Deck-Inspect	
Pickup Chain	N/A	N/A	Deck-Wear down	
Belly Chain	N/A	N/A	Deck-Wear down	
Hose Termination	N/A	Deck-Inspect	N/A	
Subsea Hose	N/A	Dive-Straighten	Pressure Test	Out of water 5 years
MBC	N/A	Dive-Visual	Pressure Test	Change Out 3 years
Ballast Box	N/A	N/A	Dive-Visual	
PLEM	N/A	N/A	Dive-Visual	
PLEM isolation valve	N/A	Dive-Visual	Pressure Test	
Rigid Pipeline	N/A	N/A	Dive-Pipeline swim	
PLEM anodes	N/A	N/A	Dive-visual	

1.6.2 DETAILED MAINTENANCE SCOPE - SPM

Routine maintenance for SPM is as per table 6.2 below. All reports for maintenance work to be sent to PetroSA Responsible Area Engineer no later than 2nd day of every month. All monthly reports to include daily operations report for review by PetroSA Responsible Area Engineer.

TABLE – 1.6.2: SPM - INSPECTION AND MAINTENANCE SCHEDULE (IMODCO)

[illegible]

TENSIONING WINCH			Check Protection Measures	5.4.5						
Wire Rope				5.4.6	Run out, check & Lubricate	5.5.4				
Davit			Inspect & Lubric	5.4.6						
ITEM	WEEKLY PRE-BERTH	& REF.	MONTHLY	REF.	3-MONTHLY	REF.	YEARLY	REF.	INSPECTION AS REQUIRED	REF.
MOORING CHAIN - CHECK & INSPECT							Chain Body Wear	5.6.4	After Accidental Impact &	5.7.2
							Thrash Area		After Major Storm	5.7.1
							Chain Angle			
							Buoy Position Retensioning		Retensioning	5.7.9
MOORING HAWSER:	Visual	5.3.8	Check & Lubric. Load Cell	5.4.7	Remove & Inspect Hawser	5.5.5			After Major Storm	5.7.1
CATHODIC							Clean & Inspec.	5.6.5	After Accidental	5.7.2
PROTECTION							Check Potent. (Bi-annually)		Impact	
SUBMARINE HOSES			Visual Configuration	5.4.8					Replacement	5.7.6
									After Impact	5.7.2
									After Testing	5.7.8
FLOATING HOSE	Visual	5.3.9	Detail Visual	5.4.9					Replacement	5.7.6
									After Testing	5.7.8
SAFETY EQUIPM'T						5.5.6	Inspection		After Major Storm	5.7.1
CORROSION PROTECTION					Inspect and Repair	5.5.7				
SPARES					Visual Inspec.	5.5.8				
TELEMETRY SYSTEM	Visual	5.3.11	Check Calibration	5.4.11						
PLEM					Visual	5.5.9				
					Valve Operat'n					

Kindly note that all tenders and quotations are done via our eProcurement system. The information given on our website under “Open Tenders” is an extract of the full Tender. To access the full set of tender documentation, you must log in with your unique Username and Password that you received upon registration. LOGIN AT : https://procurement.petrosa.com/iss_prd/

The PetroSA database is linked to the Treasury Central Supplier Database. If you have an MAAA number from Treasury Central Supplier Database, you are

already registered. DO NOT register again. Otherwise, please register on the Treasury Central Supplier Database (CSD) to obtain an ‘MAAA’ number. Please also ensure that your Tax status is compliant on your (National Treasury) CSD registration and with SARS.

Note: Suppliers whose registration status reflects “Registration not Approved”, or “Registration in Progress” will not be able to submit a tender/quote online. Please complete your registration process. For assistance with registration, please contact the PetroSA helpdesk on 021-928-4730.

If you require assistance with your login details, please contact support on 012 663 8815 or email support@intenda.net