

SECTION 4

SCOPE OF SERVICES

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE REPAIRS TO THE SPM PIPELINES FOR PETROSA, MOSSEL BAY

1. PROJECT BACKGROUND

PetroSA owns and operates a Gas to Liquids Refinery [GTLR] in Mossel Bay, South Africa and utilizes a Central Buoy Mooring (CBM) facility and a Single Buoy Mooring (SPM) facility to import feedstock and export finished product. The SPM handles multiple products and is connected to the onshore tankfarm via three pipelines:

- 1 x 8" – this line was utilized for ballast water but is no longer in use.
- 1 x 12" – used for petrol export and reformat / condensate import.
- 1 x 14" – used for diesel export and condensate import.

The above pipelines are 3.4 km in length from the tank farm to the SPM. From the shoreline to the SPM, the pipelines are housed in a 2.95 km long 36" diameter carrier pipe subsea bundle.

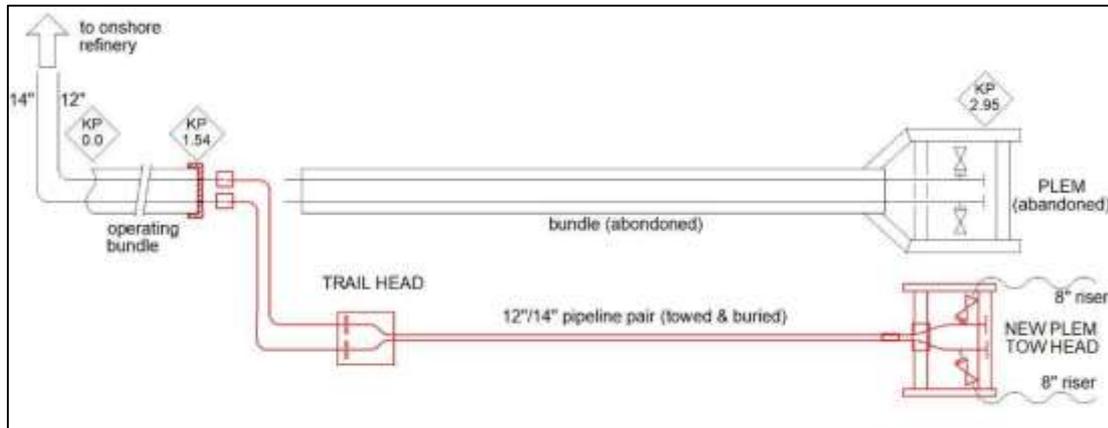
The petrol & diesel lines were intelligently pigged in 2016 and showed areas of external corrosion on both lines over an 800m section located in the region of 2.1km to 2.9km from the onshore pig launcher. An inline inspection (ILI) undertaken in 2018 on the 12" pipeline confirmed further corrosion attack to the point of leakage (numerous defects with 85% WT. loss). The 12" pipeline was subsequently decommissioned in January 2019 when it failed service test.

The last pigging on the 14" pipeline was done in March 2021. This was a follow-up inspection on previous findings based on inspection conducted in December 2019. The March 2021 inspection reported corrosion anomalies to a maximum depth of 65% WT, located after 2 km of the pipeline and concentrated on full circle orientation.

A Front End Engineering (FEED) study focusing on the replacement of the damaged sections of the 12" and 14" pipelines was completed in November 2020. The repair solution from the FEED study is the installation of 2 x 1.4 km long parallel bypass steel pipelines with corrosion and concrete weight coating and anodic cathode protection. The pipelines will terminate in a new PLEM seabed structure tied into the existing SPM at one end and to the existing bundle with mechanical connectors and steel Z-spools at the other end. The new 2 x 1,4km pipelines will be installed 15 meters parallel to the 36" abandoned carrier pipeline.

2. REPAIR SCOPE OF WORK

The figure below presents a schematic overview of the repair scope of work between the tie-in to the operating bundle at KP1.54 to the New PLEM Tow Head at KP2.95. New infrastructure is shown in red.



PetroSA Logistic Base in Voorbaai will be used as a stringing yard. The pipes will be welded together in string lengths of between 207 and 216 meters. Each pipe string will be stored on an elevated pipe rack adjacent to the launch way, from the pipe rack the pipe strings will be rolled on to the launch way, ready for pulling. The launch way will be temporarily located from the stringing yard down the 122m dunes slope to the sea. The launch way will consist of elevated rollers at regular spacing to support the pipeline towards the tugboat at sea.

Once the first section is towed out a suitable distance, the next section of approximately 216m is welded to the first and the tow out is repeated. This sequence of activities is repeated until the desired length has been obtained. The fully welded section is then positioned subsea at the desired location and the bypass is installed using mechanical connections

3. Applicable EIA Listing Activities

Having reviewed the Environmental Impact Assessment Regulation Listing Notice 1, 2 and 3 of 2017, (GN No. R325 and R327 of 07 April 2017), as promulgated under Chapter 5 of the National Environmental Act, 1998 (Act No 107 of 1998) ("NEMA") the following possible listed activities were identified:

Listing Notice 1

- 19 A – *The infilling or depositing of any material of more than 5 cubic meters into or dredging, excavation, removal or moving of soil, sand, shells, shellgri, pebbles or rock from (iii) the sea*
- 54 - *The expansion of facilities:- (i) in the sea, in respect of – (f) infrastructure or structures where the development footprint is expanded by 50 square meters*

or more.

- 65 - The expansion and related operation of any other structure of infrastructure on or along the seabed, where the expansion will constitute an increased development footprint.

PetroSA is seeking to appoint an independent Environmental Assessment Practitioner (EAP) as required by the Environmental Impact Assessment (EIA) Regulations published under the National Environmental Management Act, 1998 (Act No 107 of 1998) and as amended, to manage the public participation process and conduct the necessary environmental assessment process for the repairs to the SMP pipelines.

It is envisaged that a basic assessment process would be required for this activity. The appointed EAP will clarify/confirm the process required as part of the deliverables.

4. EAP SCOPE OF WORK

The EAP is required to:

- To assess and confirm the category of listed activities the project will deem to fall under, thereby determining whether a Basic Assessment or a Scoping and Environmental and Impact Reporting process is required.
- Take into account the issues listed in section 13 of the EIA regulations.
- To manage the EIA process and identification of and application for the relevant permits
- Manage the public participation and EIA approval process on behalf of PetroSA as required by the National Environmental Management Act (NEMA) No 107 of 1998, Environmental Impact Regulations (Gazette No 326, 07 April 2017 or as amended).
- Ensure that the provisions of the NEMA and the EIA Regulations as well as other legislation (if applicable) are adhered to. This will include ensuring that the relevant statutory procedures are followed and to apply for the required authorisations in terms of the aforementioned legislation.
- Take into account all potential impacts of the proposed activity and consider alternatives, all comments and concerns raised by interested and affected parties, and all other related planning documentation or reports that may be relevant to the study.
- Determine SPM and CBM pipeline servitude width within the pipelines corridor.

Specialist Studies:

- It is envisaged that a marine impact assessment would be required. The EAP to prepare scope of work and appoint a marine specialist to complete this work.
- The EAP will liaise with, and co-ordinate the activities and inputs of the specialists as appointed for this process if required.
- The specialist studies are to be costed for and included in the financial proposal

5. DELIVERABLES

- All reports to be provided in English. One Electronic copy in Microsoft Word format and one hard copy set of each document are to be provided excluding any copies by the regulatory authorities and other interested and affected parties.

6. LEGAL and POLICY FRAMEWORK

Environmental Impact Regulations

The Consultant will ensure that all the applicable legislation is identified and that the process can accommodate any environmental licence application above that is required by the National Environmental Management Act (NEMA) No 107 of 1998 as well as the requirements stipulated in Governance Notice 326 of 07 April 2017 or as amended.

The consultant should take cognisance of the principle of international acceptability and achieving world-class standards when performing the required work. The assessment should therefore reflect international oil and gas industry norms and standards for safety, health and the environment.

7. OBLIGATIONS OF THE CONTRACTOR IN TERMS OF SCOPE OF WORK

The Services

No Services shall be performed without a Work Order / Purchase Order issued by PetroSA's Procurement Office. No invoice will be paid without the corresponding Purchase Order number appearing on the invoice.

Quality Assurance

The Contractor shall ensure that the Services (including all workmanship) and all products and materials, documentation, tools and equipment used or required for the Services comply with PetroSA's Quality Assurance and Certification Requirements

8. TECHNICAL PROPOSAL

The Technical Proposal shall comprise the following:

Overview of project

In this part of the proposal the Consultant must demonstrate a thorough understanding of the project by indicating what is considered to be the aims and the desired end-products of the Service.

Approach to work

- The Consultant must describe concisely, its approach to the EIA process.
- The Consultant is expected to work closely with the project team to ensure an aligned and iterative process.

Work Schedule

The Consultant must define how the work will be undertaken and to provide a detailed schedule in line with the defined phases as per the EIA regulations, including the expected deliverable from each phase. The consultant should also include a Project Inception phase where activities could typically include confirmation of scope of work, meeting with key regulators, setting up appropriate project management and approval structures, meeting with other project partners and PetroSA

The Consultant must provide a project schedule showing:

- Calendar time in months;
- Major activities and milestones;
- Consultant's program of work, indicating main and sub tasks

Experience Record

The Consultant must provide information of company experience in the relevant aspects pertaining to conducting an EIA process relevant to Petroleum Refinery Industries. Note that PetroSA wishes to discourage brochuremanship and unnecessary costly proposal preparation. The material presented should be prepared with maximum economy to ensure that the resources of neither Proposers nor Evaluators are wasted.

The Consultants must list (as per the table below) at least four (4) projects undertaken within the past nine (9) years. Two (2) projects pertaining to Basic Assessment process and two (2) for Scoping and Environmental Impact Reporting Process. One (1) of the projects referenced must be relevant to EIAs conducted for a Petroleum Refinery Industry or Marine Environment. For each of the projects listed, the following information must be provided:

Name of Company	Exact services performed	Period of execution (commencement and	Name of Contact person	Value of the	Telephone number and/or
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		completion dates)	at a referenced company	Contract of Services performed	email address of contact person at referenced company

In the case where the services listed above were performed as sub-contractors, or within a consortium of joint venture, this should be clearly stated, with an indication of the proportions of the services provided by each participant.

Project Team Experience

In this part of its proposal, the Consultant shall supply information on qualifications and experience in a tabular format (as indicated in the table below) for professional staff that will be involved in the project. The following information is required:

Name and Surname of team member	Position in company	Educational qualifications	Professional qualifications (societies, publications, etc)	Relevant experience

The project team specifically the senior consultant and consultant must have a minimum of two (2) environmental impact assessments (EIA) person, one (1) of the four (4) which must be relating to a Petroleum Refinery Industry or Marine Environment within the past nine (9) years, are required to qualify for this service.

PetroSA attaches a great degree of importance to the qualifications and experience of the staff proposed. The Consultant must ensure that if selected for this project, the nominated staff is assigned as proposed. Failure to do so may result in the annulment of the award of contract.

Company Information

Concise but full information should be provided on the company designated the Controlling Company which would take overall responsibility for the Services and which would enter into a contract with the Client. If the designated company is part of a group or a consortium, the proposal should clearly indicate the following:

- The company's relationship to the other members of the group.
- The percentage of work that will be carried out by these designated sub-contractors

- The exact manner in which any other company member or members of the group would participate in the assignment and contribute to the work.
- What the fields of activity of each partner shall be.
- The Black Economic Empowerment status of these other groups or subcontractors.

The information should be presented in a tabular fashion as far as possible, with the applicable agreements between partners and any supporting descriptive material regarding these agreements, being presented in a separate addendum.

In addition, any actual or potential conflicts of interest must be declared and details provided.

9. CHANGES TO THE SCOPE OF SERVICES

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

10. FINANCIAL PROPOSAL

General

A lump-sum fee plus direct reimbursable costs contract will be awarded. The overall price ceiling will be established during contract negotiations, on the basis of the cost estimate contained in the Financial Proposal.

Payment to the Consultant will be in the two categories listed below:

- Consultancy Fee
- Direct Reimbursable Costs

Consultancy Fee

The Consultant shall assume, for the preparation of their financial proposals that payments will be made in the following manner:

The payments for services will be made at completion of defined stages, expressed as a percentage of the total fee, in the case of lump sum fee payments. The specific percentages will constitute individual ceilings that will not be exceeded. The fees proposed shall be based on the specified disbursement schedule.

If changes to the specified disbursement schedule are required, the Consultants shall provide motivation for the proposals.

Direct Reimbursable Costs

The consultant should provide an indicative total figure for the reimbursable element and provide a description and unit cost for expenses. All costs not so itemised, shall be deemed to be covered by the consultancy fee.

Air travel required shall be in the most economical class available and by the most practical and direct route.

The Consultant is to indicate typical prices of accommodation, car hire services and secretarial services to be used whilst engaged on the Service.

Only actual costs supported by invoices and/or receipts, with no mark-up, will be reimbursed.

Provisional Sums

Certain Provisional Sums will be included in the contract amount. Such sums shall be expended only on the direction or with the approval of the Client.

Payment Schedule

The Consultant's cost estimates are to be presented generally in the format of a payment schedule as per the project phases described in the approach to work.