Expression of Interest for the provision of Onshore Drilling Waste Management Services

DESCRIPTION:
TotalEnergies EP Namibia is looking for experienced local Services Providers for the provision of Onshore Drilling Waste Management Services.

SCOPE OF WORK:
Service provider shall have all its Onshore Waste Treatment Facilities, equipment & Waste Treatment products available in country one (1) month before the commencement date.
Service provider shall possess a Logistical and Supply Base in Namibia, which shall include, but not limiting to the following:

- A Warehouse and a yard to store service provider equipment and Waste Treatment products.
- A fully equipped workshop to perform maintenance, redress, repair and overhaul of service provider equipment.
- Enough office space fully equipped with computer hardware and software and communications tools required for the performance of services.

All support personnel required to perform the services in service provider Logistic base with high level technical assistance and engineering services

- Provide a competent technical engineering team dedicated to TotalEnergies for the services, who will be located in Namibia at service provider onshore base and be experienced, and capable of handling end-to-end waste management operations as specified.
- Prepare technical reports and periodic meetings reports as required by TotalEnergies

Service provider core business services shall be including but not limited to:

- **Offshore Waste Management** services include Tank cleaning on Offshore worksite, and on TotalEnergies's Procurement Vessel Supply (PSV),
- **Onshore Waste Management** services include transportation and disposal of Hazardous and Non Hazardous Drilling Waste Onshore.

  Area for disposal of Hazardous Drilling Waste ideally located as close as possible Lüderitz.
  Once a year, service provider shall receive from local authorities their approval to dispose hazardous waste in designated area and submit it to TotalEnergies yearly.

To ensure the redundancy and avoidable single source of failure, service provider shall ensure to provide:

- ONSHORE transportation of Drilling Cuttings Boxes (full and empty), NABM waste and all equipment from/to TotalEnergies supply vessels to service provider treatment Plant(s) (ideally as close as possible Lüderitz) and/or disposal Site(s) is the responsibility of the service provider.
- Excellent conditioned equipment with high level of maintenance.
- Backup equipment and critical spare parts for any potential single failure point

To ensure flexibility of Onshore Waste Management services, service provider shall be required to operate from Lüderitz Port and/or Walvis Bay port.
To deliver this Onshore Waste Management service, service provider will have to select best option, depending on his Waste Treatment facilities location.

- **Option-A:** Operating from TotalEnergies's logistic base in Lüderitz (Pick up/Drop and temporary storage of Hazardous Waste/cutting skips at Lüderitz Port and Transport of Hazardous Waste/cutting skips from Lüderitz port to service provider assigned waste treatment facility, emptying and cleaning of Waste/Cutting skips and returning back the empty and clean Cutting skips back to Lüderitz port within 72 hours Turnaround time).

- **Option-B:** Operating from Walvis Bay Port (Pick up/Drop Hazardous Waste/cutting skips from TotalEnergies Support Vessels (PSV) at Walvis Bay Port and Transport of Hazardous Waste/cutting skips from Walvis Bay Port to service provider assigned waste treatment facility, emptying and

cleaning of Waste/Cutting skips and returning back the empty and clean Cutting skips back to Lüderitz port within 72 hours Turnaround time).

To ensure flexibility of Offshore Waste Management services, especially for PSV tanks cleaning, service provider shall be required to operate from Lüderitz Port and/or Walvis Bay port.

- **Tanks cleaning Services on worksite or/and TotalEnergies PSV in Lüderitz:** Operating from Lüderitz (service provider to deliver equipment and personnel to TotalEnergies's base in Lüderitz - personnel to heliport in Lüderitz if services requested on worksite. TotalEnergies to mobilize the service provider equipment and personnel on Rig worksite for services to be performed; TotalEnergies to demobilize the service provider equipment and personnel from Rig worksite once services are performed; service provider to demobilize equipment and personnel from TotalEnergies's base in Lüderitz).

- **Tanks cleaning Services PSV in Walvis Bay:** Operating from Walvis Bay (service provider to deliver equipment to Walvis Bay port for services and personnel to Walvis Bay; service provider to demobilize equipment from Walvis Bay port and personnel from Walvis Bay once services are performed

TotalEnergies reserves the right to select the best option that will fulfil the operation requirements and provide the service redundancy.

SERVICE PROVIDER SERVICES DESCRIPTIONs

Offshore *Waste Management* services.

This service consist on:

- Preparation, and Execution of Rig Tank cleaning services, maximum of two (2) days duration (48hours) for surface pits or 3-5 days total duration for both surface pits and storage/reserve pits in case these latter are to be cleaned.
- Be responsible in the overall management, supervision and quality control of the Tank Cleaning Operation.

Onshore *Waste Management* services.

This services consist on:

- Provision of an Environmental Baseline Study (EBS) to establish the baseline level of potential contaminants in the soil and groundwater beneath the landfill site and assess the extent of contamination.
- Security guards at the landfill site, including lightening for night shift.
- Onshore Transportation and Tracking of Hazardous Solids Drilling Wastes using Cutting skips from Lüderitz Port or Walvis Bay Port to service provider designated Waste Treatment Facility.
- Onshore Transportation and Tracking of Hazardous Liquids Drilling Waste using Vacuum trucks or dedicated tote tanks from Lüderitz Port or Walvis Bay Port to service provider designated Waste Treatment Facility.
- Temporary storage area of Hazardous Drilling Waste in the vicinity of Lüderitz Port
- Provide big open top skips in case of storage of cuttings at cement plant.
- Handle, collect and dispose all Solids and Liquids Non Aqueous Base Mud (NABM) drilling waste at service provider Onshore facility (Drill Cuttings, Contaminated NABM Fluids, Slop water, Sludge and any other Hazardous Drilling Waste). service provider Onshore facility ideally located as close as possible Lüderitz.
- Provide Onshore Disposal services with adequate personnel and equipment for Solids and Liquids Hazardous Drilling Waste, in line with Local Environmental Legislation and TotalEnergies Requirements. service provider Onshore facility ideally located as close as possible Lüderitz.
- Tracking and reporting of Solids/Liquid waste quantities received at service provider facility and treatment applied on each batch of waste solids/liquid waste received at service provider facility from TotalEnergies worksite /Rig.
- Tracking and Reporting of final disposal of Liquid and Solids treated remaining, on batchwise basis.
- Provide waste treatment and disposal certificate accordingly in line with Local Environmental Legislation and TotalEnergies Requirements

- Any closure or decommissioning of Municipal Land fill area must be reported and associated closure/decommissioning of land fill site certificate along with the evidence of land fill area condition must be submitted.
- Post analysis of any equipment failure or services non-compliance.
- Maintenance and repair performed and spare parts consumption of equipment.
- Utilize, maintain and/or repair of all equipment.
- Inventory list of spare parts remaining on service provider facility.
- Inventory list of products consumed and remaining on service provider facility.

SERVICE PROVIDER ONSHORE WASTE DISPOSAL PROCESS

Service provider shall provide Onshore Waste Management facilities that capable to perform the described services. Service provider Onshore facility ideally located as close as possible Lüderitz.

Once a year, service provider shall receive from local authorities their approval to dispose hazardous waste in designated area. service provider shall submit to TotalEnergies yearly approval letter.

During the OPERATIONS, all Hazardous Drilling wastes (Solids and Liquids) will be transferred from Offshore Worksite to TotalEnergies's logistic base in Lüderitz, then service provider will transfer them to service provider's designated Onshore Treatment & Disposal Facilities (ideally located as close as possible to Lüderitz).

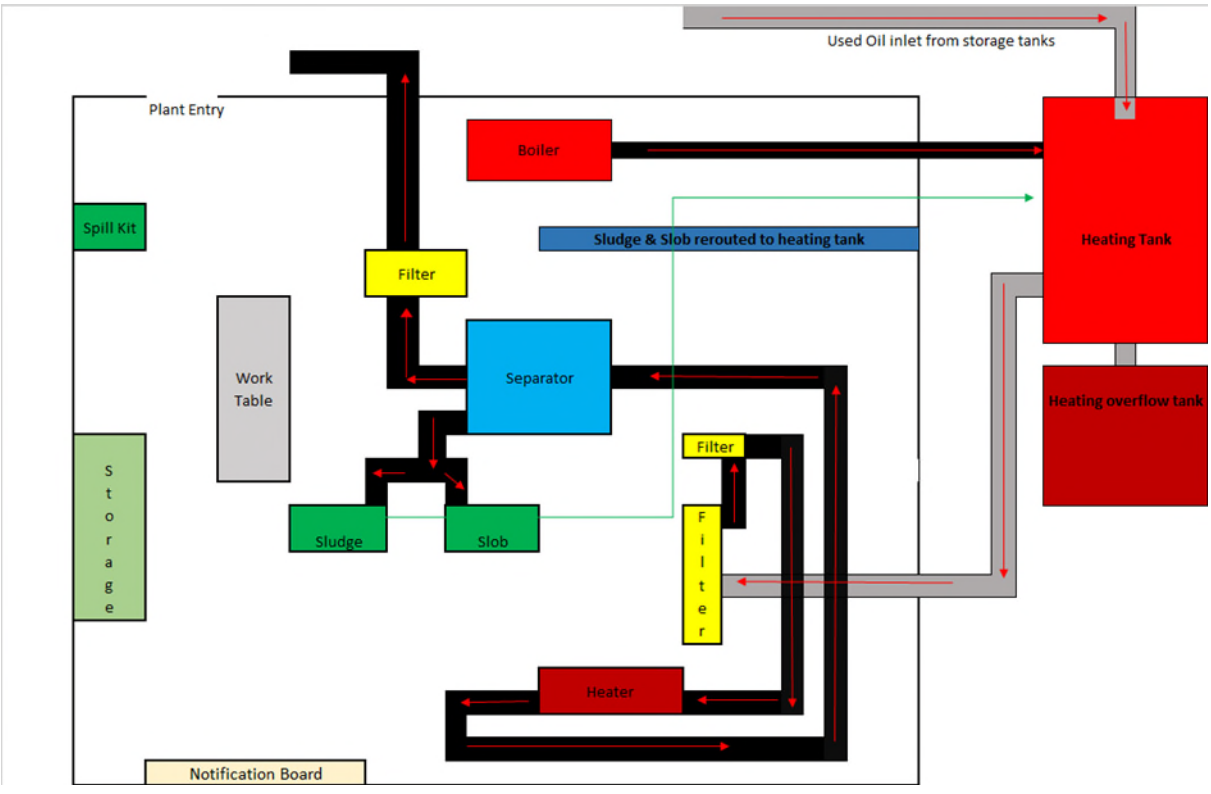
service provider shall provide a full process of treatment and final disposal of all NABM Solids and Liquids drilling wastes.

Service provider shall be responsible for ensuring that the method of treatment and disposal will be in accordance with the Environmental Guidelines and regulatory framework in the treatment in country.

In the event that the process to be utilized by service provider involves further treatment of the oil contaminated cuttings, the effluents will need to meet the requirements of treatment country regulations.

NABM Liquids drilling waste disposal

Service provider shall dispose **NABM Liquid drilling waste** using process described below, in accordance with TotalEnergies internal requirements and achieve objectives in respect of Landfill design disposal as described below



In the event that the process to be utilized by service provider involves further treatment of the oil contaminated cuttings, the effluents will need to meet the requirements of Namibian regulations.

NABM Solids drilling waste disposal

For NABM Solids drilling waste disposal, TotalEnergies allows service provider to offer the method of treatment and disposal of its choice, as long as this selected methodology will be in accordance with the Environmental Guidelines and regulatory framework in the treatment in country.

2 methods of treatment and disposal: Landfill disposal and Thermal Desorption process through a Thermal Desorption Unit

Landfill Disposal

Service provider shall perform the services using the Landfill disposal methodology in accordance with TotalEnergies internal requirements and achieve objectives in respect of Landfill design disposal as described. The wastes have first to be stabilized, then landfilled with proper soil and groundwater protection.

Step 1 - Waste stabilization

Temporary storage should be avoided; hazardous waste shall not be temporarily stored directly on the ground.

Before being placed in the disposal pit, wastes will need pre-treatment at the landfill site.

Pre-treatment operations such as oily solids waste stabilization, shall be realized on a specific concrete area, designed to avoid any spread outside the concrete slab.

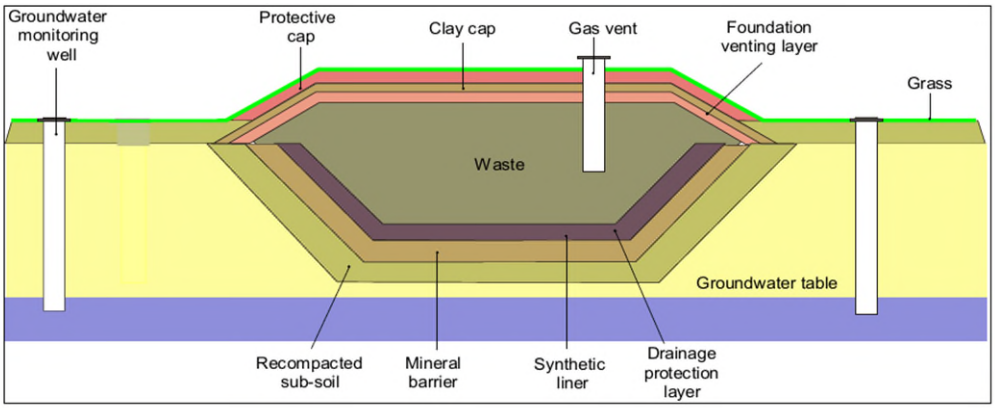
The waste stabilization shall be done with appropriate cement and additives quantity for solidification and fixation process. The mixing retention time of the product shall be adapted to ensure homogeneity of the waste mixture with cement and additives.

Quality control of stabilized waste shall be done prior to final disposal.

Step 2 - Landfill design

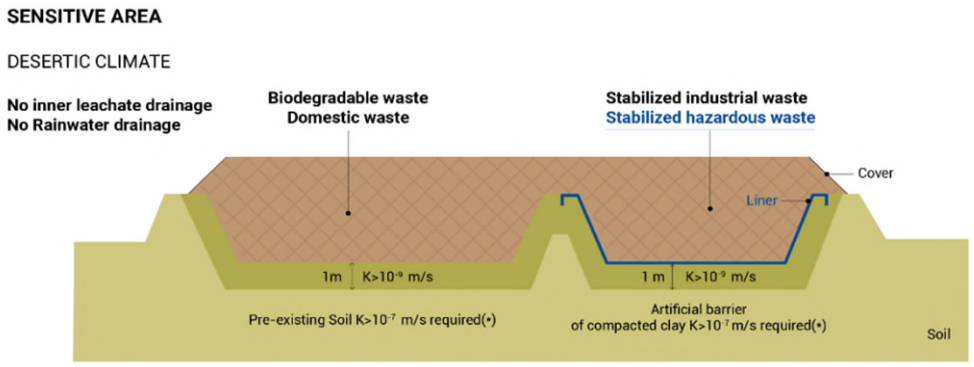
Landfill pit requirement:

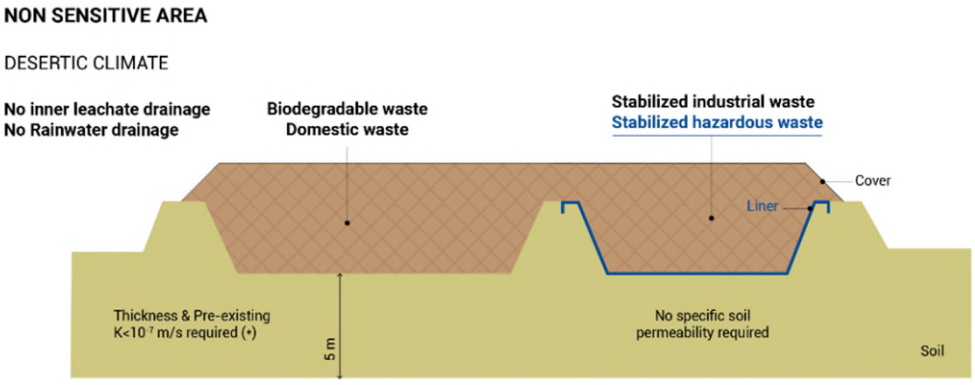
Dimensions: Pit with maximum dimension of Length 20m, Breadth 20m & Height 2 meter OR equivalent to accommodate +/- 500MT of stabilized drilling waste, shall be ready in advance for the mentioned scope of work.



Based on the above typical design and depending on the environmental characteristics of the area, a specific design shall be required by TotalEnergies

Climate Zone	Sensitivity of the area	Landfill type	Soil and groundwater protection
Desertic Climate rainfall < 200 mm/year	**non-sensitive area**	**hazardous landfill**	liner system Leachate drainage, monitoring and treatment
		non-hazardous landfill	no liner system no leachate drainage
	sensitive area	**hazardous landfill**	Impermeable clay barrier K < 10^{-9} m/s – thickness > 1m (or alternative solution considering a hydraulic resistance of 10,000 days) Liner system Leachate drainage, monitoring and treatment
		non-hazardous landfill	Impermeable clay barrier K < 10^{-9} m/s – thickness > 1m (or alternative solution considering a hydraulic resistance of 10,000 days) Liner system No leachate drainage
Temperature and humid climate rainfall > 200 mm/year	**non-sensitive area**	**hazardous landfill**	Rainwater drainage (+roofing with cladding in tropical areas) Liner system Leachate drainage, monitoring and treatment
		non-hazardous landfill	Rainwater drainage (+roofing with cladding in tropical areas) Liner system Leachate drainage if any, monitoring and treatment
	sensitive area	**hazardous landfill**	Impermeable clay barrier K < 10^{-9} m/s – thickness > 5m (or alternative solution considering a hydraulic resistance of 50,000 days) Rainwater drainage (+roofing with cladding in tropical areas) Liner system Leachate drainage, monitoring and treatment Groundwater quality monitoring





The geomembrane or alternative device shall be impermeable, chemically and mechanically compatible with the stored wastes.

Welded High Density Polyethylene (HDPE ≥ 1.5mm) is currently the most commonly used geomembrane for landfill bottom liner systems, due to its strength and chemical resistance to leachate constituents.

The final cover is a multilayer structure with the following minimum requirements:

- A draining layer at least 0.3 m thick above the waste pile to collect gas and biogas, with a Gas vents over the entire cover structure.
- A 1 m thick impermeable layer covered by a HDPE liner.

- A drainage layer at least 0.3 m thick
- A topsoil layer.

Step 3 - Landfill monitoring

Landfill pit will be closed out after completed operations as per above requirement. service provider must submit full report when the work will be executed.

Service provider will ensure the long-term follow-up (minimum of ten (10) years) in monitoring evolution of stabilized waste landfill designated disposal area. During the time frame any possible decommissioning/closure of Municipal land fill site needs to be reported to TotalEnergies and associated closure certificate/intimation letter needs to be issued along with evidence of landfill area condition.

The monitoring will consist of visual aspect to confirm landfill area is in good condition, with no degradation, access restricted and fenced.

Thermal Desorption process through a Thermal Desorption Unit

Those cumbersome diesel units are generally installed in specific waste management treatment facilities. Drilling wastes are collected into large tanks and fed into a funnel at the rotary kiln entrance using shovel or screw conveyor. Temperature inside the rotary kiln may vary, but is typically around 600°C. At these temperatures water and base fluids are vaporized before passing through a condenser where they are separated. In this process, heat could be generated mechanically by a hammer mill and not any more by an electric or fuel heater, thereby reducing safety concern.

Solids, base fluid, and water are recovered and separated. Base fluid is generally stored in nearby tank then recycled into drilling fluids system via drilling fluids contractor on demand. It can alternatively be utilized as combustible to power the unit.

It is recommended to select a setup composed of few small units rather than a big one. It will minimize the impact on operation in case of failure, or during the yearly maintenance.

Treatment rates may vary depending of the water content and size of unit, but we can typically consider as an average 2t of wet cuttings treated per hour. Storage tanks should be designed accordingly, or additional units considered in case the volume of activity is durably increasing.

Typical diesel consumption is in a range of 0.7 to 1.0m^3 of diesel per day for conventional unit.

Due to the temperature reached in a TDU, the GHG throughput by tons of cuttings processed is believed to be about 350 Kg of CO_2 / Ton of cuttings. This emission factor needs however to be requested to the supplier.

Main advantages: base fluid recovery (recycled usually "free of charge"); low percentage of oil-on-cuttings (inert output); suitable to treat high-liquid-content mixtures.

Disadvantages: Quality of recovered base fluid; heavy setup; suitable for long term projects (mobilization costs); onshore treatment only.

If applicable, all recovered Base Oil will be transported by vacuum truck from the service provider's treatment base to TotalEnergies designated LMP in Walvis Bay.
Service provider shall provide and responsible also for the following services:

- Emptying and cleaning Skips/tanks at the treatment plant and certified disposal site.
- Treatment of Cuttings Waste to the service provider's specification, which shall be comply with Namibian laws and specifications for disposal of wastes.
- Transportation/trucking of end-processing waste to disposal area.

- Technical evaluation of treated materials and recording and reporting of same, this to include the associated costs of any third party laboratories.
- Reporting, recording and clean-up of any accidental spills or discharges from the service provider's transport, loading, offloading or at TotalEnergies worksite and service provider's treatment facilities and worksites.

SERVICE PROVIDER EQUIPMENT

Service provider shall provide all equipment required to perform the services no later than one-month prior commencement date.

service provider equipment shall be mobilized and installed in conformity with TotalEnergies specifications (when relevant), as per Rig contractor recommendation (zone classification) and contract requirements in designated locations. Service provider equipment provided shall be designed for the safety-zone-area classification where it is deployed.

All relevant spare parts shall be made available permanently for all service provider equipment.

Service provider shall provide all the equipment, materials and related requirements for handling and packing (baskets, mini containers, slings, certificates, maintenance etc..) to meet TotalEnergies requirements.

All service provider's equipment to be operated within certain safety zones (explosion proof; zones 1, 2 and 3) shall be certified for operation within such zones.

SERVICE PROVIDER PERSONNEL

Service provider shall have available qualified, competent personnel always secured to perform the services and to meet expected progress in the performance of services.

Service provider shall provide a comprehensive organization plan for service provider personnel to be assigned to the services and maintain the proposed team through the entire operational period

Service provider shall manage any of logistics and administrative aspects linked to his personnel and equipment handling (visas, import formalities into the country, etc...).

DELIVERY METHODOLOGY

Service provider should be aware that all containers delivered to TotalEnergies premises (base or quayside) will be subject to a systematic inspection. Any failure to meet the minimum requirements of these regulations will result in the container and the contents being refused as unacceptable.

Delivery of all shipments of products and service provider equipment, which are identified as hazardous, must be accompanied by documentation in accordance with applicable laws.

This will include but not limited to:

- Hazard labels on each individual item.
- Dangerous goods declaration and packing certificate where applicable
- Delivery location: TotalEnergies quayside at Lüderitz or Walvis Bay Port or any other delivery point nominated by TotalEnergies.

REPORTING

Service provider shall provide the following indicators monthly:

INDICATOR	MONTHLY QTY (t)
HYDROCARBON RESIDUAL CONTENT IN STABILIZED CUTTINGS TO BE DISPOSED OF AT LANDFILL (HC content after treatment performed on the cuttings, to reduce their toxicity prior to their final discharge to the environment onshore)	%
TONNAGE OF CUTTINGS DISPOSED OF IN LANDFILL (TONS)	
DRILLING EFFLUENTS RECEIVED BY THE CONTRACTOR (MONTHLY QUANTITY IN TONS / M3) (Used water-based fluids, brines, completion or workover fluids suitably de-oiled before being discharged)	
AUTO-CONSUMED LIQUID FUELS – QUANTITIES - INDICATE TYPE OF FUEL (GASOLINE, DIESEL) (Quantities of fuel consumed (truck trips))	
QUANTITY OF RECOVERED OIL (Separated from oily slop water)	
QUANTITY OF SLUDGE DISPOSED OF AT LANDFILL	

Service provider shall provide waste treatment certificates on each batch of waste solids/liquid waste received at service provider facility from TotalEnergies worksite /Rig.

Service provider shall report, record and clean-up of any accidental spills or discharges from the service provider's transport, loading, offloading or at service provider's treatment facilities.

PREREQUISITES:

To qualify for participation in this Expression of Interest process, prospective Service Providers must demonstrate a proven track record of past experience in conducting the above-mentioned services.

Accordingly, Service Provider must meet the following criteria:

- ✓ Being certified for ISO 9001 and 2000
- ✓ Provision of an Environmental Baseline Study and an Environmental Impact Assessment on landfill site located as close as possible to Lüderitz as well as permit and/or authorization from the municipality to dispose of hazardous waste
- ✓ Ensure that the design, operation, and monitoring of any landfill site used is as per TotalEnergies rules and requirements
- ✓ Able to provide sufficient means of transportation and handling equipment to handle cutting skips coming from Lüderitz port to Service provider or landfill site
- ✓ Having equipment capable of treating oily contaminated water, sludge, and slops
- ✓ Demonstrate commitment to HSE standards and local regulations
- ✓ Demonstrate competence in waste pre- treatment and quality control prior to disposal

DOCUMENTS TO BE SUBMITTED:

1. A detailed company profile, including an organizational chart.
2. Curriculum Vitae (with contact details of at least three referees for whom similar work has been completed).
3. Sufficient certification for tank cleaning crew including offshore requirements (confined space entry, breathing apparatus user, H2S awareness, OEUK or comparable occupational medical, BOSIET)

CLOSING DATE: **1st of August 2025 at 15h00**, by electronic submission.

TotalEnergies EP Namibia shall not accept submissions rendered after the closing date and time.

ELECTRONIC SUBMISSION OF DOCUMENTS:

- Email: ep-teepna-cp@totalenergies.com
- Subject: **TEEPNA Expression of Interest for Onshore WM Services**

DISCLAMER:

TotalEnergies EP Namibia shall not be responsible for any costs incurred in the preparation and submission of response to this Expression of Interest.