



**Environmental Monitoring Service, at the  
Bulk Terminal RO Plant, Port of Saldanha on  
a monthly basis for a period of three (3)  
months**

**Document Reference Number:**  
SOW-17-02-22-001

**Site:**  
Bulk Terminal Saldanha

**Date:**  
05 June 2025

*Distribution of this document is restricted to Transnet and  
Transnet approved entities only*

## **TABLE OF CONTENT**

1. DEFINITIONS.....	3
2. ABBREVIATIONS .....	6
3. BACKGROUND.....	6
4. SCOPE OF REQUIREMENTS .....	7
5. QUALITY AND SERVICE .....	8
6. GENERAL SAFETY AND COMPLAINT SPECIFICATIONS.....	11
7. ANNEXURES.....	14

## **1. DEFINITIONS**

### **1.1.Commissioning:**

1.1.1. The process of assuring that all systems and components of a building or industrial plant or product designed, installed, tested, operated, and maintained according to the operational requirements of the owner or final client.

### **1.2.Contract**

1.2.1. An agreement with specific terms between two or more parties or entities based on mutual consent, which has legal effects and involves transfer of consideration – usually financial or some other type of benefit.

### **1.3.Contract Manager**

1.3.1. Transnet employee who is authorised to represent Transnet in terms of the contract and appointed to supervise and/or liaise with the contractor to ensure that the specifications of the contract met (with special emphasis on technical specifications, inspection of quality, on health and safety, environment and quantity of work). A contract manager has the role of executing the plan to achieve the deliverables. This person receives all his authorisations from the project initiator and the stakeholders.

### **1.4.Contract Owner**

1.4.1. The person who requires a specific product, goods or services and who is responsible to provide the budget and approval.

### **1.5.Contract**

1.5.1. An employer (organisation) or a person performing any work and has entered into a legal binding business agreement contract to supply a product or provide services to Transnet. This applies to the Suppliers, Vendors, and Consultants, Service providers and Contractors.

## **1.6. Contractor Execution Plan**

- 1.6.1. A site, activity or project specific documented plan in accordance with the client's project requirements. The Contractor to Transnet submits a plan for approval prior to mobilization on site. The Contractor Execution Plan includes, inter alia: Health and Safety, Environmental, Energy, Quality, Delivery plans etc.
- 1.6.2. Contractor Compliance File a file or other record containing the information in writing required by Transnet.

## **1.7. Environmental Impact Assessment**

- 1.7.1. Environmental assessment is the assessment of the environmental consequences of a plan, policy, program, or actual projects prior to the decision to move forward with the proposed action.

## **1.8. Coastal Waters Discharge Permit**

- 1.8.1. means a permit contemplated in section 69(1) of the National Environmental Management: Integrated Coastal Management Act , 2008 (Act No.24 of 2008)

## **1.9. Job Owner:**

- 1.9.1. Any permanent employee of BTS who been trained, tested and found competent, and appointed in writing for the purpose of carrying out or supervising work on plant, machinery and equipment.

## **1.10. Risk Assessment**

- 1.10.1. A risk assessment in this procedure means the process where all risks associated with the contract and its execution identified, mitigated and managed.

## **1.11. Specification**

- 1.11.1. An act of identifying something precisely or of stating a precise requirement.

## **1.12. Permit Issuer:**

- 1.12.1. The operations shift manager will be responsible for the issuing of permits.

## **1.13. Permit Number:**

1.13.1. A number issued by CCR that logs the work performed, the person responsible for the work and the approximate duration. Note: This is not the same as the sequential number on the Permit to Work.

#### **1.14. Permit to Work:**

1.14.1. A written document indicating the equipment to work on, the potential hazards, how and where these hazards negated, signatures indicating that equipment is safe and the names of all persons working on the equipment.

#### **1.15. Responsible Supervisor:**

1.15.1. The SHEQ Manager who been assigned responsibility for environmental and safety matters for the Saldanha iron-ore and multipurpose terminals off the plant.

## **2. ABBREVIATIONS**

<b>2.1.</b>	CWDP:	Coastal Waters Discharge Permit
<b>2.2.</b>	SHERQ:	Safety, Health, Environmental, Risk and Quality
<b>2.3.</b>	SOP:	Standard Operating Procedure
<b>2.4.</b>	TPT:	Transnet Port Terminals
<b>2.5.</b>	CV:	Conveyor
<b>2.6.</b>	RFQ:	Request For Quotation
<b>2.7.</b>	OHS:	Occupational Health and Safety
<b>2.8.</b>	OHSAS:	Occupational Health and Safety Act of South Africa
<b>2.9.</b>	SANS:	South African National Standards
<b>2.10.</b>	IOHF:	Iron Ore Handling Facility
<b>2.11.</b>	MPT:	Multipurpose Terminal
<b>2.12.</b>	EAP:	Environmental Assessment Practitioner
<b>2.13.</b>	AIR:	Atmospheric Impact Report
<b>2.14.</b>	WCDM:	West Coast District Municipality
<b>2.15.</b>	NEM:ICMA:	National Environmental Management: Integrated Coastal Management Act 39 of 2004
<b>2.16.</b>	MPTA:	Million Tons Per Annum

## **3. BACKGROUND**

TPT-IMS-SLDT-SOW-014-001  
Scope of Work  
©Transnet SOC Ltd

**3.1.** TPT-Saldanha has been issued with a Coastal Waters Discharge Permit (CWDP) by the Department of Environmental Affairs for a Reverse Osmosis Desalination Plant that discharges concentrated brine effluent from diffusers situated either side of Caisson 3 of the Iron-Ore Terminal at approximately -5 m MSL (Permit Reference Number 2012/003/WC/TRANSNET). Previously mentioned permit prescribes certain monitoring that has to be performed to determine the impact the RO plant has on the environment.

**3.2.** Transnet Port Terminals (TPT) Saldanha Terminals thus requires a service provider that will perform laboratory tests and analysis of the RO plant brine water and sedimentation. These tests and analysis are required in order to ascertain whether the RO plants activities impact on the surrounding environment and to ensure compliance with coastal waters discharge permit (CWDP).

#### **4. SCOPE OF REQUIREMENTS**

**4.1.** The service provider will be responsible to conduct the following monitoring and compilation of the reports in line with the requirements as set out in the scope of work and the Legal requirement for a period of 3 Months since award of the contract.

##### **4.2. Effluent quality monitoring**

4.2.1. Measurement of pH, temperature, salinity, dissolved oxygen concentration and saturation as well as saturation, in the brine basin of the RO Plant and at weekly intervals.

4.2.2. Collection and analysis of a composite brine samples for analysis of trace metals (Cr, Ni, Fe, Mn), and Total Suspended Solids (TSS), salinity, Ph and toxicity (using a test such as the sea urchin fertilisation test) at monthly intervals in the brine basin and effluent drain leading to municipal drainage system.

##### **4.3. Environmental monitoring**

4.3.1. Continuous monitoring of temperature, salinity, pH, dissolved oxygen concentration and saturation to be conducted at two points either side of the iron ore terminal 50 m from the discharge point, in the direction corresponding

with the mostly like path taken the effluent as indicated by available bathymetry data (Figure 3) and at an appropriate control station (e.g. North Buoy in Small Bay).

- 4.3.2. Collection of water samples from the middle and bottom of the water column at three stations situated 50 m from each point of discharge and analysis for salinity, pH, total suspended solids, metals (Fe, As, Cd, Cu, Cr, Hg, Mn, Ni, Pb, Zn), and toxicity (using a test such as the sea urchin fertilisation test) every 3 months. (Figure 3).

#### **4.4. Reporting**

- 4.4.1. Prepare reports for TPT to be submitted monthly. It is important to note that only the reports must be submitted monthly, and the monitoring must still be done in accordance with scope of requirements as stated previously.
- 4.4.2. The date, time and monitoring point, name of person who took the sample, in respect of each sample taken must be recorded together with results. The laboratory results should be included in the report as an annexure as well as the actual outcome of the sample indicating whether it is in spec or exceeds the specified threshold as set out in the CWDP.
- 4.4.3. Prepare presentations summarising results from the monitoring programme for delivery at the Public Advisory Forum (PAF) – in line with the CWDP requirements, on a quarterly basis.

#### **4.5. General**

- 4.5.1. The service provider should be able to immediately upon award of the contract start monitoring.
- 4.5.2. Service Provider to use CTD Sonde to conduct monitoring. Any Maintenance done quarterly, and Calibration done of Sonde to be conducted by Service Provider, as required by the Manufacturer specifications for the duration of the contract. The calibration certificate is to be supplied as an annexure to the report when these calibrations renewed.

- 4.5.3. Service Provider to ensure all vessels and crew (divers) used should be suitably qualified and that proper arrangements should be made with the Port Authorities for vessel use and port access. It is important to note that service provider would be responsible to appoint divers and vessel crew to conduct ocean monitoring in line with the TIMS SHEQ Contractor Specification Guidelines.
- 4.5.4. All data analysis must be carried out in accordance with methods prescribed by and obtainable from the South African National Accreditation System in terms of the Standards Act, 1982 (Act No.30 of 1982), unless another comparable method has been approved of, in writing, by the (DFFE) Department of Forestry, Fisheries and the Environment.
- 4.5.5. The various sample results must be compared to the specifications as set out in TPT Saldanha Coastal Waters Discharge Permit (CWDP) and DWAF (Department of Water Affairs and Forestry) (1995) South Africa Water Quality Guidelines for Coastal Marine Waters. Volume 2: Recreational Use.

## **5. QUALITY AND SERVICE**

### **5.1. Human Capital**

- 5.1.1. The Service Provider shall deploy suitably quality environmental practitioners to undertake the scope of the services and who do not have less than 5 years' experience within sector.
- 5.1.2. A detailed track record of consultants who will be deployed to work on the Project for TPT will need to be provided, which track record will be checked and verified by TPT.
- 5.1.3. The service provider shall be entitled to solicit the services of an expert to assist it in delivering the Scope of Services to TPT where required subject to the consent of TPT.
- 5.1.4. The service provider shall ensure that human resources deployed on the project not have criminal records, be of sober habits, and are medically fit with a sound reference of previous experiences in the field.
- 5.1.5. The Service Provider shall be fully responsible to Transnet Port Terminals (TPT) for the acts and omissions of its employees, permitted sub-contractors and agents. Furthermore, the service provider shall be solely liable for any damage caused to Transnet Port Terminals (TPT) property or injury caused to Transnet



Port Terminals (TPT) Employees due to the negligence of its employees, permitted sub-contractors and agents while at or on TPT sites.

## 5.2. Communication

- 5.2.1. The Service Provider(s) will be required to inform Transnet Port Terminals (TPT) in writing of all the challenges they are faced with Transnet Port Terminals (TPT) staff during the execution of the services.
- 5.2.2. The service provider(s) will further be required to attend a monthly Service Level Agreement (SLA) meeting whereby all issues for the previous month will be addressed to ensure that a resolution is obtained.
- 5.2.3. The drivers must always have a means of communication with Environmental Department (e.g. cell phone).

## 6. GENERAL SAFETY AND COMPLAINE SPECIFICATIONS

- 6.1. The Contractor must submit a detailed Contractor Execution Plan (CEP) to the Contractor Manager for approval as per **TRN-IMS-GRP-GDL 014.5 Contractor Execution Plan minimum requirements**.
- 6.2. Contractor must submit **TRN-IMS-GRP-TMP 014.3 Employee Personal Profile Dossier** to Contract Manager for approval before induction training confirmed and site visits to be undertaken. Approved Employee Profile Dossiers includes certified copies of medicals, identity documents, competencies etc. submitted via email correspondence to **TPTSLD-Induction-booking@transnet.net**.
- 6.3. Contractor Compliance SHE File within accordance with File Contractor Compliance File **Approval Checklist TRN-IMS-GRP-TMP-014.2** and in line with relevant applicable specifications as per respective **TRN-IMS-GRP-GDL 014.2 Contractor Specification Guidelines**.
- 6.4. Principle contractor approve **Mandatar Agreement** in terms of **section 37(2) TRN-IMS-GRP-TMP-014.1** of the Occupational Health and Safety Act (OHS Act) and submit to Contractor Manager to agree.
- 6.5. The Principle Contractor must **submit written request** to the Contractor Manager for permission for sub-contract to provide any work or services to TPT and ensure that all **37.2 Agreement between Principle contractor and Sub Contractor** submitted to Contractor Manager.

- 6.6. Contractor must **submit** completed **SHE File Electronic** to Contractor Manager for approval.
- 6.7. Contractor undergoes induction training prior to handing over the site to the Contractor as **TRN-IMS-GRP-GDL 014.6 Contractor Induction Minimum Requirements**.
- 6.8. SITE ESTABLISHMENT:
- 6.9. All relevant permits and authorisations is as per **TRN-IMS-GRP-TMP 014.7 List of Legal Permits and Authorisations** shared and completed prior to site access. **Contractor appointed** within accordance with **TRN-IMS-GRP-TMP-001.1** prior to site access by TPT.
- 6.10. Contractor Manager will conduct **TRN-IMS GRP TMP 014.8 Pre-site handover inspection** prior to Site Access granted with Service Provider.
- 6.11. **No work will commence with approved TRN-IMS-GRP-TMP-014.10 Operational Safe Work Permit** issue to the contractor-by-Contractor Manager.
- 6.12. CLOSE OUT PHASE (if applicable)
- 6.13. Contractor Manager and the Contractor must co-sign the **TRN-IMS-GRP-TMP-014.13 Final Handover and Closeout Inspection Checklist**.
- 6.14. TESTING AND COMMISSIONING:
- 6.15. The Contractor Manager will **develop a test and commissioning plan of the project** and communicate it to the contractor.
- 6.16. If applicable, The Service provider will ensure compliance to **TPT SLDT SHEQ-RS PRO 021\_Lock Out Procedure** and lock out and isolation done by Trained and competent employees with conjunction with TPT competent.
- 6.17. Service provider shall implement and maintain applicable Health, Safety, Quality and Environmental regulations and other relevant standards and regulation, example: applicable SANS codes; OHS Act of 1993, other legislation, ISO 9001, ISO 14001 and ISO 45001, etc.
- 6.18. Service provider to ensure that all employees involved in activity is informed of the Hazards and risk they exposed to and all other relevant applicable Safety Work Procedures, fall protections Plans, Environmental Plans, Emergency Plans and any other relevant procedures, etc. proof to be submitted as part of the SHE File.
- 6.19. Service Provider will ensure that On the Job HIRAS is completed prior to start of activity to ensure that any additional Risks been identified.

- 6.20.** If Applicable the Service provider must ensure that when required to off-load or load any heavy equipment and machinery on the plant that they comply with that equipment or machinery will not be physically operated by an employee when required to off-loaded or load from any flatbed or low bed.
- 6.21.** Principle Contractor will be responsible to ensure that Subcontractor SHE File compiled within conjunction with TPT Requirements and Approved prior to submission to Contractor Manager.
- 6.22.** If applicable Service Providers are liable to collect and remove all waste generated during the contract/project. Generated Waste will not be allowed being disposed of within TPT waste skips. Removal of Hazardous waste will be contractor's responsibility and Disposal Certificate submitted to SHEQ after waste has been disposed safely.
- 6.23.** The Service Provider to ensure full compliance to TPT COVID 19 requirements and Government Safety measures regarding preventing the spread of the COVID 19 virus.

**Contact the following employees at SHERQ Department:**

**SHERQ Manager: Werner Labuschagne**

Email: [Werner.Labuschagne@transnet.net](mailto:Werner.Labuschagne@transnet.net)

Contact number: 022 703 4945

**SHERQ Manager: Marlon Saayman**

Email: [Marlon.Saayman@transnet.net](mailto:Marlon.Saayman@transnet.net)

Contact number: 022 703 4914

## 7. ANNEXTURE

**7.1. Annexure 1** (Positions where in situ measurements of water quality will be made from the side of the Iron Ore Terminal)



**8.2 Annexure 2** (positions for the collection of sediment and benthic macrofauna)



**8.2 Annexure 3** (positions for water quality monitoring stations in the Saldanha Bay receiving environment)

