

SPECIFICATION FOR THE APPOINTMENT OF A SERVICE PROVIDER TO CONDUCT HEAVY METALS CONTAMINANT TRACING AT THE PORT OF EAST LONDON

TABLE OF CONTENTS

A	- PURPOSE	2
B	- OBJECTIVES.....	2
C	- SCOPE OF WORK.....	2
D	- PRE-QUALIFICATION CRITERIA.....	3
E	- TIME OF DELIVERY	3
F	- INFORMATION TO BE OBTAINED ON SITE.....	4
G	- EVALUATION CRITERIA.....	Error! Bookmark not defined.
H	- SERVICE PROVISION REQUIREMENTS	4
I	- SCHEDULE OF QUANTITIES	Error! Bookmark not defined.
J	- APPROVAL OF THE SPECIFICATION	Error! Bookmark not defined.

A PURPOSE

- The Port of East London has reported elevated levels of heavy metals (e.g., Cadmium, Copper, and Chromium) in its sediments, water columns, and biota. The potential sources include port operations, upstream industrial activities, stormwater discharges, and maritime traffic. This project aims to trace and identify the sources and pathways of contamination to inform mitigation, compliance, and remediation actions.

B OBJECTIVES

- As per the existing Long-term ecological and sediment quality monitoring program that identifies and quantifies heavy metal contaminants in water, sediment, and biota within and around the Port. Trace sources and transport pathways of contamination using appropriate scientific tracer techniques.
- To assess the spatial and temporal distribution of contaminants.
- To recommend management and remediation strategies based on findings.

C SCOPE OF WORK

Scope of work should be guided by the following aspects, but not limited to them only:

C.1 Project Planning and Inception

- Conduct project kickoff meeting.
- Review historical data, reports, and maps of the area (to be made available by TNPA).
- Define key performance indicators (KPIs) and project milestones.
- Develop a detailed project execution plan including safety, QA/QC, communication protocols, and project timeframes.

C.2 Field Sampling and Monitoring

Site Reconnaissance:

- Identify strategic sampling points (marine, estuarine, and adjacent terrestrial environments).

Sampling:

- Surface and subsurface water sampling.
- Sediment coring and grab sampling.
- Biota collection (e.g., filter feeders, fish species, plants).
- Stormwater and industrial outfall sampling (if accessible).

Monitoring Parameters:

- In situ: pH, salinity, DO, temperature, redox potential.
- Laboratory: Heavy metals (Pb, Cd, Hg, Cr, Zn, Cu, Ni, As), TDS, organic content.

Source Tracing and Pathway Analysis

- Use of isotopic fingerprinting, chemical markers, and statistical modelling (e.g., PCA, GIS-based spatial analysis).
- Identify point and non-point sources (e.g., shipyards, storm drains, upstream catchment).
- Modelling contaminant dispersion and sediment transport.

Deliverables

- Inception report
- Sampling and analysis plan (SAP)
- Accredited Laboratory results report
- Source tracing analysis and interpretation report
- GIS contamination maps (Shapefiles)
- Contaminant dispersion and sediment transport model presentation
- Final project report with recommendations

D PRE-QUALIFICATION CRITERIA

- The following documents must be submitted together with the quotation. Provision of insufficient information will result in the quotation being disqualified:

The Environmental Specialist who will be a Project Lead must have the valid registration of South African Council for Natural Scientific Professions (SACNASP) OR Environmental Assessment Practitioners association of South Africa (EAPASA).

E TIME OF DELIVERY

- The service provider must note that time is of the essence in the contract and that the successful service provider will be required to provide, service and complete the scope and achieve project objectives within the agreed period as specified in this document, of which failure will result to action being taken or even suspension of the contract.
- It must be noted that penalties may be imposed on the service provider should they not be able to deliver services as per the agreement.

F INFORMATION TO BE OBTAINED ON SITE

- The site briefing will not be compulsory for the bidders; only the successful bidder will be supplied with the Port of East London's Long-term ecological and sediment quality monitoring program reports.

G SERVICE PROVISION REQUIREMENTS

- The Service provider shall provide a service which meets the interest of public health, hygiene, and environment.
- The service provider shall comply will all the relevant legislation during the contract period.