

## TECHNOLOGY INFORMATICS DESIGN ENDEAVOUR

### Terms of Reference/Request for Proposal

**Date: 14.08.2024**

Proposals are invited by Technology Informatics Design Endeavour (TIDE) from qualified laboratory to provide testing and quality monitoring services for Wastewater and Compost. The selected laboratory will be responsible for conducting various tests to ensure compliance with environmental regulations and standards.

#### Introduction

Technology Informatics Design Endeavour (TIDE) is a development organization based in Bengaluru that leverages technology for conserving the environment, creating livelihoods, and addressing societal issues. TIDE's work encompasses energy access and biomass-based cooking solutions, environment conservation through energy waste and water interventions, and Technology based innovative livelihoods, particularly with a focus on rural women. TIDE is currently implementing a project titled Integrated Water Management in partnership with BORDA, in different towns of Karnataka. For more information about TIDE, please visit [www.tide-india.org](http://www.tide-india.org)

<b>Title</b>	<b>"Selection of Laboratory for Testing of Wastewater and Compost."</b>
<b>Location</b>	Chikkaballapura, Karnataka
<b>Nature of Assignment</b>	The project aims to test samples of wastewater and compost from TIDE's various interventions in Chikkaballapura which includes the DEWATS facility and the community compost units in Kandavara colony. The scope of work includes traveling to Chikkaballapura, collecting samples from the DEWATS (wastewater) and community compost unit (compost), testing these samples in the laboratory, and sharing the test reports with TIDE.
<b>Contract period</b>	The contract period will be for the duration of 5 Months

#### Background of Project:

In Chikkaballapura, a land parcel near Kandawara lake was identified and developed into a layout by the City Municipal Council and plots and houses were allocated to sanitation workers and ragpickers under the Government schemes with support from Civil Society Organizations. The houses started

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coming up in the last 2-3 years, but they lacked access to sewerage connections. This was because it was not feasible to connect the houses to the existing UGD system because it was far and against the gradient. Some people continue to live in temporary shelters without functional toilets as their houses are still under-construction. Thus, many residents resorted to open defecation.

The residents of the colony along with TIDE, BORDA and CMC Chikkaballapura took up the challenge of securing access to the decentralized sanitation services in the colony. A site was identified for the construction of the community toilet and a 10KLD DEWATS facility for treating the wastewater. A simplified sewer system for collection and conveyance of wastewater from 30 household has been implemented.

Aerobic composting unit of 500 kg capacity of 2 numbers got installed in Feb month 2024. We have observed that out of 92 HH' s only 50 HH' s are occupied. The segregated wet waste is being composted in the compost unit.

### **Terms of Reference:**

The bidder shall be responsible for the activities and roles mentioned herein, and shall also support TIDE wherever reasonable and possible, to ensure that the objectives of the assignment are met. The details of the assignment are given below:

### **Scope of Work:**

#### **1. Collection of Samples to perform tests:**

- The selected laboratory shall collect samples of Wastewater and compost at regular intervals from the DEWATS and the community compost units.

#### **2. Testing Requirements:**

- The selected laboratory shall perform tests of the collected samples as per the prescribed norms and standards to meet the requirements and validate the data collected.
- Perform comprehensive testing of wastewater and compost samples.

##### **i. Wastewater samples from Settler inlet, gravel filter outlet, polishing pond outlet monthly once**

- ✓ pH
- ✓ Chemical Oxygen Demand (COD)
- ✓ Biochemical Oxygen Demand (BOD)
- ✓ Total Suspended Solids (TSS)

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- ✓ Total Kjeldahl Nitrogen (TKN)
- ✓ Total Phosphate (TP)
- ✓ Faecal Coliform
- ✓ Oil & Grease
- ✓ Arsenic
- ✓ Lead

### ii. Compost from the community compost bins (Monthly and Quarterly)

Monthly	Quarterly
✓ pH	✓ Calcium
✓ Moisture	✓ Sodium
✓ Total organic carbon	✓ Magnesium
✓ Nitrogen	✓ Sulphur
✓ Potassium	✓ Volatile solids
✓ Phosphorus	✓ Lead
✓ C:N ratio	✓ Mercury
✓ EC	✓ Boron
✓ Zinc	✓ Cadmium
✓ Iron	✓ Nickle
✓ Copper	✓ Chromium
✓ Manganese	✓ Arsenic
	✓ Bulk density
	✓ Microbial biomass
	✓ Germination index

**Note:** Pricing to be mentioned individually for Wastewater and Compost

### 3. Reporting:

- Laboratory shall be required to report detailed analysis of the sample tested and provide timely hard copy and electronic reporting of the analytical results, and submit the same to TIDE.

### Deliverables:

Regular test reports summarizing results for wastewater and compost, including data analysis and compliance assessment.

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### Eligibility criteria:

The laboratory should meet the following eligibility criteria:

• ISO/IEC 17025 - General requirement for the competence of testing and calibration of laboratories
• ISO/IEC Guide 25 – General requirement for the competence of calibration and testing laboratories
• EN 45001 – General Criteria for the operating of testing laboratories
• NAMAS - General criteria of competence for calibration and testing laboratories

### Evaluation Criteria:

S. No	Indicator	Description	Document Evidence	Weightage
1	Bid Price	Price quoted by the agency for completion of the assignment	Lumpsum cost	100%
All the eligible firms will be graded on the above criteria. The one with the highest grade will be awarded the contract.				

*The bidders are requested to quote a bid price each for testing of each sample of wastewater and compost for the above-mentioned parameters in separate bid forms as provided in the Annexure IV*

### Duration of the assignment:

The work shall be executed on 20<sup>th</sup> of every month starting from August 2024 to December 2024. The laboratory should adhere to the work plan as shown below. **(Subject to revision based on mutual consent or as per ground condition)**

### Work Plan:

The project duration is from the 3<sup>rd</sup> week of August 2024 to 4<sup>th</sup> Week of December 2024.

Activity	August 3 <sup>rd</sup> Week 2024	20 <sup>th</sup> August 2024	20 <sup>th</sup> September 2024	20 <sup>th</sup> October 2024	20 <sup>th</sup> November 2024	20 <sup>th</sup> December 2024
Award of contract						
Sample Collection						

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### **Schedule of Payment:**

The payment shall be made on a monthly basis, depending on the number of samples collected and tested each month (which depends on the type of sample and the quotation given for that particular sample). Once the test reports are submitted the payment will be processed after verification of the information. All payments will be made only after we receive the original invoice at the office address.

### **Submission of Proposal and deliverables:**

The proposal must be submitted over email to the email id: [sasi.priya@tide-india.org](mailto:sasi.priya@tide-india.org) & [iwm.accountant@tide-india.org](mailto:iwm.accountant@tide-india.org) with the following documents attached,

- Supporting documents for eligibility and evaluation criteria
- Self-certification of not being blacklisted by central/state government agencies.
- Properly filled Annexure I to VI

### **Confidentiality and Intellectual and Other Property Rights**

All reports, notes, statistics and other documents and data compiled and collected, or software developed by the Contractor under this Agreement shall be confidential and the property of TIDE. The Parties herein agree to keep the terms of this TOR all or any information which any or all of the parties herein shall become acquainted with shall not be disclosed, either directly or indirectly to third parties or be used in any way, or in any manner that would be detrimental to the business of the partners.

Sd/-  
Director-TIDE