

REQUEST FOR PROPOSAL (RFP) FOR
“Procurement, Commissioning and Maintenance of Two Mobile Environmental
Monitoring Laboratories (fully fabricated) for monitoring and analysis of air,
water, and noise pollution parameters in Chennai District & Manali - Ennore
Region (MERRC) for Tamil Nadu Pollution Control Board”



Tamil Nadu Pollution Control Board

தமிழ்நாடு மாகாண கட்டுப்பாடு வாரியம்

RFP Ref No.TNPCB/DD (L) /F. No. 9317/2025/ Mobile Lab Est. Dt. __ /08/2025.

Sd/- xxxxx
Chairperson

TIMELINE OF IMPORTANT DATES

Date of Release of online RFP	25.10.2025
Last Date for Addendum	13.10.2025, 01:00 PM
Last Date for Online Proposal Submission	15.10.2025, 01:00 PM
Date of Opening of Technical Proposal – Online	15.10.2025, 03:00 PM
Opening of Financial Proposal	25.10.2025, 03:00 PM (Tentative)
Negotiation meeting	Will be intimated as per the approval
Tender Application Fee	Rs. 2000 /-

IMPORTANT NOTICE

This tender procedure is governed by the Tamil Nadu Transparency in Tenders Act, 1998 read with Tamil Nadu Transparency in Tender Rules, 2000 as amended from time to time. In case of any conflict between the terms and conditions in the tender document and the Tamil Nadu Transparency in Tenders Act, 1998, the Tamil Nadu Transparency in Tender Act, 1998, read with Tamil Nadu Transparency in Tender Rules 2000 shall prevail.

ACRONYM

S. No.	Abbreviation	Expansion
1.	RFP	Request for Proposal
2.	TNPCB	Tamil Nadu Pollution Control Board
3.	OEM	Original Equipment Manufacturer
4.	EMD	Earnest Money Deposit
5.	JV	Joint Venture
6.	AMC	Annual Maintenance Charges
7.	GST	Goods & Service Tax
8.	IT	Information Technology
9.	SOW	Scope of Work
10.	PDF	Portable Document Format
11.	DTP	Desktop Publishing

DISCLAIMER

The information contained in this Request for Proposal document ("RFP") or subsequently provided to Bidder(s), whether verbally or in documentary or any other form by or on behalf of the Member Secretary, TNPCB, or any of their employees or advisors, is provided to Bidder (s) on the terms and conditions set out in this RFP and such other terms and conditions subject to which such information is provided.

This RFP is not an agreement and is neither an offer nor invitation by the MEMBER SECRETARY, TNPCB, to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in preparing their technical proposals and financial offers pursuant to this RFP.

This RFP includes statements, which reflect various assumptions and assessments arrived at by the **MEMBER SECRETARY, TNPCB**, in relation to the Assignment. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require. This RFP may not be appropriate for all persons, and it is not possible for the **MEMBER SECRETARY, TNPCB**, its employees or advisors to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP. The assumptions, assessments, statements, and information contained in this RFP may not be complete, accurate, adequate or correct. Each Bidder should, therefore, conduct its own investigations and analysis and should check the accuracy, adequacy, correctness, reliability and completeness of the assumptions, assessments, statements, and information contained in this RFP and obtains independent advice from appropriate sources. Information provided in this RFP to the Bidder (s) is on a wide range of matters, some of which depends upon interpretation of law. The information given is not an exhaustive account of statutory requirements and should not be regarded as a complete or authoritative statement of law. **THE MEMBER SECRETARY, TNPCB**, accepts no responsibility for the accuracy or otherwise for any interpretation or opinion on law expressed herein.

THE MEMBER SECRETARY, TNPCB, its employees and advisors make no representation or warranty and shall have no liability to any person, including any Bidder or Bidders under any law, statute, rules or regulations or, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything contained in this RFP or otherwise, including the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Bid State. **THE MEMBER SECRETARY, TNPCB** also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statements contained in this RFP. **THE MEMBER SECRETARY, TNPCB**, may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP. The issue of this RFP does not imply that **THE MEMBER SECRETARY, TNPCB**, is bound to select a Bidder or to appoint the Selected Bidder, an Authorized manufacturer for the Assignment and **THE MEMBER SECRETARY, TNPCB** reserves the right to reject all or any of the Bidders or Proposals without assigning any reason whatsoever.

The Bidder shall bear all its costs associated with or relating to the preparation and submission of its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated with any demonstrations or presentations which may be required by **THE MEMBER SECRETARY, TNPCB**, or any other costs incurred in connection with or relating to its Proposal. All such costs and expenses will remain with the Bidder.

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DEFINITIONS

- a) “Applicant” means an authorized manufacturer having the requisite qualifications and experiences. They may download the RFP document from the website of TNPCB www.tnpcb.gov.in and www.tenders.tn.gov.in apply for the same. The Applicant who succeeds in this RFP process shall also be referred to as “Agency”.
- b) “Proposal Submission Date” means the prescribed last date for submission of the Proposal (including the Technical Proposal and Financial Bid) as provided in the Schedule for Submission of RFP.
- c) “TNPCB” means Tamil Nadu Pollution Control Board
- d) “Client” means TNPCB.
- e) **Procurement, Commissioning and Maintenance of 2 Nos. of Mobile Environmental Monitoring Laboratories (fully fabricated) for monitoring and analysis of air, water, and noise pollution parameters in Chennai District & Manali - Ennore Region (MERRC) for Tamil Nadu Pollution Control Board** as described in the Scope of Work provided in this RFP Section 2 of this RFP.
- f) “RFP” means Request for Proposal.

SECTION 1 – TENDER NOTICE

Tamil Nadu Pollution Control Board has established two-tier Laboratory setup, as per the provisions of subsection (2) of Section 17 of the water (Prevention and Control of Pollution) Act, 1974 (Central act 6 of 1974) namely Advanced Environmental Laboratories (AEL) at Chennai, Salem, Madurai, Coimbatore, Cuddalore, Vellore, Tirunelveli & Trichy and District Environmental Laboratories (DEL) at Ambattur, Dindigul, Hosur, Tiruppur, Manali, Tuticorin and Maraimalai Nagar and the newly established laboratories at Oragadam and Nagapatinam. Out of the Eight Advanced Environmental Laboratories in Tamil Nadu, five AEL's namely Chennai, Cuddalore, Coimbatore, Salem and Madurai has obtained NABL Accreditation as per ISO/IEC 17025:2017 and also OHSAS ISO: 45001:2018.

To strengthen the analytical and field capabilities of Tamil Nadu Pollution Control Board in Air and Water quality analysis for various parameters with immediate response to effects caused by natural disasters such as major cyclones, gaseous leakages, oil spillages, fire/chemicals accidents, etc., and to address public complaints, certain Mobile Environmental Laboratories for air, water, noise and microbiological analysis shall be established from the Board fund.

In accordance with the Environment, Climate Change and Forest (EC.2) Department G.O. (Ms). No. 86 Dated 05.06.2025 the Board intends to establish Mobile Environmental Laboratories for TNPCB.

Hence, proposals are hereby invited from the potential / Bonafide prospective manufacture /authorized distributors /dealers/supplying Agencies/firms Online through the website www.tntenders.gov.in to serve as an Agency for the Procurement, Commissioning and Maintenance of 2 Nos. of Mobile Environmental Monitoring Laboratories (fully fabricated) for monitoring and analysis of air, water, and noise pollution parameters in Chennai District & Manali - Ennore Region (MERRC) for TNPC Board as per the terms and conditions provided in this RFP.

SCHEDULE FOR SUBMISSION OF THE RFP: (ONLY ONLINE MODE)

EVENTS	DATE
Date of issue of RFP	25.09.2025
Date of Pre-bid Meeting	10.10.2025, 03:00 PM
Last date for issue of addendum to RFP document	13.10.2025, 01:00 PM
Last date of submission of Proposals (Proposal Submission Date)	15.10.2025, 01:00 PM
Technical Proposals opening	15.10.2025, 03:00 PM
Opening of Financial Proposal	25.10.2025, 03:00 PM (Tentative)
Negotiation meeting	Will be intimated as per the approval
EMD amount	Rs. 3,00,000/- (Rupees Three Lakhs Only) should be paid electronically in e-tender portal

Member Secretary

Tamil Nadu Pollution Control Board

SECTION 2 - SCOPE OF WORK

SPECIFICATION FOR THE PROCUREMENT, COMMISSIONING AND MAINTENANCE OF 2 NO.S OF MOBILE ENVIRONMENTAL MONITORING LABORATORIES (FULLY FABRICATED)FOR MONITORING AND ANALYSIS OF AIR, WATER, AND NOISE POLLUTION PARAMETERS IN CHENNAI DISTRICT & MANALI - ENNORE REGION (MERRC) FOR TNPCCB

The Tamil Nadu Pollution Control Board (TNPCCB), as part of its strategic initiative to augment the scientific rigour and operational readiness of its environmental monitoring infrastructure, proposes the establishment of modular Mobile Environmental Laboratories. This initiative forms a critical component of the Board's broader mandate to align with evolving regulatory benchmarks and international best practices in environmental surveillance and compliance monitoring.

The proposed mobile laboratories are envisaged to substantially enhance TNPCCB's analytical and field response capabilities in assessment of ambient air and water quality across diverse environmental settings. They shall serve as rapid deployment units, specifically designed to facilitate immediate on-site investigation and mitigation measures in the wake of environmental exigencies such as severe cyclonic events, hazardous gaseous emissions, oil spill incidents, fire and chemical accidents, and other industrial disasters. Additionally, these units will support prompt redressal of citizen grievances relating to pollution and environmental degradation.

The scope of procurement encompasses, inter alia, the supply and commissioning of technologically advanced, fully-integrated Mobile Environmental Laboratories, conforming to the technical specifications delineated in the tender document. All equipment and instrumentation shall be brand new, unused, and compliant with ISO 9001-certified quality management systems, as well as other applicable international standards including, but not limited to, those prescribed by the Bureau of Indian Standards (BIS), ASTM International, and equivalent globally recognised standard-setting bodies.

Annexure-I

List of Instruments / Equipment to be procured

Sl. No	Description	Nos. to be procured
2.	Mobile Environmental Monitoring Laboratories (fully fabricated) for monitoring and analysis of air, water, and noise pollution parameters. Man power, Operation and maintenance of Mobile Environmental Monitoring Laboratories including Instruments /Equipments for a period of one year	02

N.B: The quantity of instruments may increase or decrease.

SCHEDULE OF REQUIREMENTS

Each Mobile Laboratory Vans shall have the following schedule of requirement. The system should be completely functional. Any balance of material not specified but required for the purpose must be supplied by the bidder.

Sl.No	Brief Description
1.	Certified four wheeler vehicles having seating capacity of 17 or more suitable for mobile laboratory van. (BS-VI or better Compliant)
2.	Sensor based Air Quality Monitoring Analyzers for PM-10, PM-2.5, Flue gas analyzer, Noise level Meter hand-held Multi-gas meter (Measuring- CO, H ₂ S and VOCs), hand-held Single-gas meter (Measuring CH ₃ SH, Ammonia Chlorine) (Individual Analyzers), and Micro-Meteorological instruments.
3.	Bench top - pH, Conductivity, Dissolved Oxygen Meter, Turbidity Meter (Portable) and COD Digital Reactor Block,
4.	Arrangement for measuring water quality parameters like, Residual Chlorine, Ammonia, Nitrate, Nitrite, Fluoride, Phosphate Iron, Bacteriological examination with field water testing kit) etc. of water samples.

5.	Total Alkalinity, Total Hardness and Calcium Hardness (Titration method)
6.	Standard Methods for the Examination of Water and Wastewater, 24th Edition by <i>William C. Lipps (Editor), Ellen Burton Braun-Howland (Editor), Terry E. Baxter (Editor)</i> Methods of Air* Sampling and Analysis THIRD EDITION, By <i>JAMES P. LODGE, JR., EDITOR</i>
7.	The bidder shall supply all necessary glassware compatible with the listed instruments, including but not limited to beakers, volumetric flasks, BOD bottles, COD digestion vials, pipettes, Burettes and Reagent bottles, to enable complete field-based environmental monitoring.
8.	Miscellaneous – Niskin Sampler, Sediment Sampler, Storage racks bins for Convertible Chest freezer capacity- 75 Lit. or more, Ice Box, Infrared Thermometer, Thermo hygrometer,
9.	Arrangements like Thermally Stable Housing (Body Built up) for installation of water testing equipments/ instruments, air quality Analyzers, Noise level meters and adequate provision of electric points (Plug & Sockets) for use of laboratory instruments.
10.	GPS – enabled for location tracking, equipped with Rugged Laptop, CCTV and dash cam.
11.	Vehicles Internal system to work as environmental lab within built Vehicle AC Van will be fabricated as per standard fabrication practice and specifications confirming to all India Motors Vehicles Act. Provision of standard fitments such as first aid box, Fire extinguishers, stepney, canopy, cradle, footsteps, tool box, side view mirrors, foldable chairs and table (outdoor)etc Alternate power source for powering the instruments and for AC for a minimum duration of eight hours
12.	Operation and maintenance of mobile laboratory vans along with facilities for one year. Subject to satisfactory performance, the operation and maintenance contract may be extended annually for up to five (5) years at the same cost and terms as quoted for the first year. The decision to extend the contract shall rest solely with the Tamil Nadu Pollution Control Board.

TECHNICAL SPECIFICATIONS

2.1 Technical specification for mobile laboratory van

S. No	Feature	Specifications
1.	General	Air-conditioned vehicle suitable for installation of water quality lab equipments specified in the Schedule of requirements and required consumables. (<i>Covered Van type</i>)
2.	Color	White/Grey
3.	Engine	2.5 Liter or better
4.	Fuel type	Diesel
5.	Power	85 KW @ 2950 rpm or higher
6.	Emission	BS6 or equivalent
7.	Length	6200 mm or more
8.	Width	1900 mm or more
9.	Height	2500 mm or more
10.	Wheelbase	3700 mm or more
11.	Ground clearance	200 mm or more
12.	Transmission	5Gear+1Reverse, Manual transmission or better
13.	Brake	Front: Disk(Hydraulic power assisted) Rear: Drum (Hydraulic power assisted)
14.	Suspension	Front: Leaf Springs with Hydraulic Shock Absorbers Rear: Leaf Springs with Hydraulic Shock Absorbers
15.	Steering	Power steering
16.	Seating capacity	Driver and Co-driver Seat as OEM original
17.	Cargo Area	6.5 m ² or more
18.	Pay load	1700 Kg or more
19.	Tank Capacity	70 Liter or more
20.	Manuals	Full Documentation and maintenance manual in English
21.	Toolkit	Should includes crew / hydraulic Jack, wheel spanner, and other tools for basic routine maintenance.

2.1.1. Vehicle Customization

S. No	Feature	Specifications
1.	FRP panel	Interior top and side wall paneling should be done in GFRP (Glass fiber reinforced polymer), 6mm thickness
	Partition Wall work	Cold rolled 40X20X0.8 mm MS Rectangular hollow tubes shall be used in frame structure to hold the partition wall of 1mm FRP with 12mm plywood one side another side 6 mm plywood with black carpet mat on driver side for observing rays of opposite vehicle head lights.
3.	Inner painting work	Painted with superior quality PUPAINTS in WANWHITE COLOUR
4.	Exterior	Prominently labeled as ' Mobile Environmental Laboratory ' along with the name and logo of the Tamil Nadu Pollution Control Board , in both Tamil and English, appropriately sized and clearly displayed on all four sides of the vehicle.
5.	Interior	All the analytical instruments and other accessories should be labeled.
6.	Laboratory cabin	The interior shall be fitted with waterproof plywood base, overlaid with durable Aluminium flooring, and finished with a 2 mm thick chemical-resistant, anti-skid vinyl layer to ensure safety, durability, and ease of maintenance in field conditions.
7.	Inverter (UPS)	A 5 KVA high-frequency inverter system with pure sine wave output should be provided, supported by an appropriate number and capacity of sealed, maintenance-free, mobile lithium-ion batteries to ensure stable and uninterrupted power supply for all onboard equipment.
8.	Cub boards and working table	SS coated cup boards for working table with marble top. Cupboard for accommodate inverter, Battery, fridge and other material. All inside surface of drawer shall be laminated with balance laminate Additional shock absorbent material shall be provided inside the drawer. Adjacent to the sliding drawer a semi open able drawers for dustbins shall be provided. Overhead cupboards with glass door in RHS of the Vehicle and grab rails.

9.	P C Table	Folding table for laboratory operations with a shelf on main platform made of wood
10.	Water tank	A rectangular water storage tank of minimum 70 litres capacity, integrated with a 12-volt electric pumping motor, should be provided to ensure adequate and reliable water supply for operational requirements
11.	Laboratory sink	A stainless-steel laboratory-grade sink operated by an electrically controlled foot switch. A dedicated fresh water tank and a separate drain water tank with a gate valve shall be provided to facilitate efficient water management. Additionally, a suitably sized mirror and a wall-mounted soap dispenser shall be installed adjacent to the wash basin
12.	Canopy	Manually or electrically operated retractable canopy in appropriate size should be provided.
13.	Seating Arrangement	Driver and co-driver seats shall be new seat with folding and sliding mechanism.
14.	Fire Extinguisher mounting	2 Nos. to be provided. 1 No in the driver cabin and 1 No in laboratory 2 Kg CO ₂ and Dry Powder
15.	Laboratory stool	2 Nos. Laboratory stool to be provided
16.	Internal lights	Power LED light 12V 18W 6 Nos., Switches, sockets, PVC rooting boxes External charging ports.
17.	Electrical wiring	The complete electrical wiring system shall be executed using high-quality conduit sleeves and channeling, conforming to the latest applicable Indian Standards (IS). The layout shall incorporate independent, properly rated Short Circuit Protection Devices (SCBs) for both 220V AC mains and 12V DC auxiliary power circuits. All electrical lines shall be safeguarded with appropriately rated fuses housed within a structured fuse box assembly to ensure operational safety and ease of maintenance. Furthermore, dedicated and clearly labelled electrical supply points shall be provisioned on the working table for each individual scientific instrument, ensuring uninterrupted and secure power distribution.
18.	Sticker work	Sticker work for body using vinyl and radium material. UV radiation resistant sun control film for windows.
19.	Windows	Window opens with sliding glass 2Nos. with Roller blinds or track-mounted curtains, Dual-layer flame retardant fabric – blackout inner layer and dust-resistant outer layer; preferably anti-static and antimicrobial window curtains to be provided.

20.	Chest Freezer	Refrigerator 65 liters or more capacity should be provided																				
21.	GPS	A GPS-based vehicle tracking system shall be seamlessly integrated with the mobile laboratory. The system shall support real-time tracking functionality with continuous data transmission to a central monitoring platform. It shall provide live location, movement history, and geo-fencing capabilities.																				
22.	CCTV Cameras	IP-based Dome Camera (Indoor, vandal-resistant, vehicular grade)																				
23.	First Aid kit	First Aid kit should be provided First Aid Box Specifications: <table><tr><th>Parameter</th><th>Specification</th></tr><tr><td>Type</td><td>Portable, Wall/Floor Mountable (as needed)</td></tr><tr><td>Material</td><td>High-impact resistant ABS plastic / powder-coated steel</td></tr><tr><td>Color</td><td>White / Red with cross symbol (as per BIS 2217:1993)</td></tr><tr><td>Capacity</td><td>Minimum 5-person capacity</td></tr><tr><td>Locking</td><td>Secure latch/lock system</td></tr><tr><td>Dimensions</td><td>Approx. 40 cm (L) x 30 cm (W) x 15 cm (H)</td></tr><tr><td>Weight</td><td>≤ 4.5 kg (fully loaded)</td></tr><tr><td>Water & Dust Resistance</td><td>IP54 rated or higher</td></tr><tr><td>Markings</td><td>Clear labelling with list of contents and expiry monitoring chart</td></tr></table> Contents of First Aid Box (As per BIS Standard IS: 2217 and modern field safety needs):	Parameter	Specification	Type	Portable, Wall/Floor Mountable (as needed)	Material	High-impact resistant ABS plastic / powder-coated steel	Color	White / Red with cross symbol (as per BIS 2217:1993)	Capacity	Minimum 5-person capacity	Locking	Secure latch/lock system	Dimensions	Approx. 40 cm (L) x 30 cm (W) x 15 cm (H)	Weight	≤ 4.5 kg (fully loaded)	Water & Dust Resistance	IP54 rated or higher	Markings	Clear labelling with list of contents and expiry monitoring chart
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Markings	Clear labelling with list of contents and expiry monitoring chart																					

		3. Gas Mask Specifications:	
		Parameter	Specification
		Type	Full Facepiece or Half Mask with replaceable cartridges
		Standard	IS 14166 / EN 136 / NIOSH approved
		Protection Class	ABEK1 or equivalent (against Acid gases, Organic Vapours, Ammonia, etc.)
		Material	Thermoplastic Elastomer / Silicone
		Filter Type	Dual Cartridge (Activated Carbon + HEPA Particulate)
		Filter Life	Minimum 8 hours under industrial exposure
		Compatibility	Replaceable filters, bayonet-style fitting
		Lens	Scratch-resistant, anti-fog polycarbonate
		Harness	Adjustable 4-point head straps with comfort padding
		Fit	Universal adult size
		Accessories	1 Pair filters, 1 Carrying Pouch/Box, Instruction Manual
		Shelf Life	5 years (mask), 3 years (filter – unopened)
24.	Personal Protective Equipment (PPE) Kit	Full-Body Protective Coverall Material Composition: Multi-layered SMS (Spunbond-Meltblown-Spunbond) or Microporous Laminate Fabric with enhanced barrier efficacy against particulate and fluid ingress. Fabric Density: Minimum 90 GSM for optimum tensile strength and barrier protection. Protection Level: Class 3 or above as per ISO 16603 (synthetic blood penetration resistance); compliant with EN 14126 (barrier against infective agents). Design Attributes: Anatomically contoured fit with integrated hood, elasticated wrists, ankles, and waist. Seam construction: Ultrasonically sealed or double-stitched and taped for fluid-impermeability.	

		Front zipper with flap cover for additional sealing. Physical Properties: Abrasion and puncture-resistant; breathable for thermal comfort under extended usage. Application Scope: Chemical handling, airborne pathogen exposure, and high-risk field sampling. Safety Goggles Lens Material: Optically clear, high-impact polycarbonate with anti-fog, anti-scratch, and UV-resistant coating. Ventilation: Indirect air vents with microbial ingress protection. Field of View: Wide-angle panoramic design with wrap-around protection. Adjustability: Elasticized head strap with variable tension control. Compliance Standards: EN 166:2001 (Europe), ANSI Z87.1 (USA) – Optical Class 1. Functional Performance: Chemical splash resistance, dust protection, and high optical clarity for laboratory precision. Particulate Respirator Mask Type: Foldable, negative-pressure particulate respirator (N95 / FFP2 class). Filtration Efficiency: ≥ 95% for non-oil-based aerosols, including particles ≥ 0.3 microns (as per NIOSH 42 CFR Part 84). Layering Technology: Multi-layer electrostatically charged polypropylene filter media. Ergonomic Features: Integrated nose clip for hermetic seal Optional exhalation valve for enhanced breathability during extended use Elastic dual headbands for secure fixation Standards Compliance: NIOSH N95 or EN 149:2001+A1:2009 FFP2 IS 9473:2002 (for Indian markets) Nitrile Gloves Material: High-grade synthetic nitrile elastomer; free from natural rubber latex to prevent Type I hypersensitivity. Thickness: Minimum 5 mil (0.13 mm) at the palm for chemical resistance. Dimensions: Ambidextrous, non-sterile, 240 mm (minimum) in length.
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		Surface Finish: Textured fingertips for enhanced tactile sensitivity and grip. Chemical Resistance: Proven resistance to solvents, acids, and biological contaminants. Compliance Standards: EN ISO 374-1:2016 (chemical resistance), ASTM D6319, ISO 13485. Protective Shoe Covers Material: Polyethylene-coated non-woven spunbond fabric or equivalent for slip resistance and barrier protection. Design: Universal fit with elastic opening; anti-skid sole pattern. Fluid Resistance: Impermeable to splashes and spills. Usage: Disposable; single-shift recommended. Standards Compliance: IS 17423:2020 / EN 13795 (as applicable). Head Cover / Bouffant Cap Material: Lightweight, breathable spunbond polypropylene. Fit: Elastic circumference for universal head coverage. Purpose: Prevents contamination of samples and protects against ambient dust. Face Shield Material: Optical-grade PET (Polyethylene Terephthalate) with anti-fog coating Thickness: Minimum 175 microns Design: Full-face wrap-around visor with soft foam forehead support and elastic headband Protection: Splash and droplet barrier Standards: ANSI Z87.1 or equivalent CE certification Ear Plugs: Type: Reusable soft silicone or disposable PU foam ear plugs Design: Contoured or flanged design for optimal noise isolation Noise Reduction Rating (NRR): Minimum 28 dB Corded/Uncorded: As required; corded preferred for field application to prevent loss Material: Hypoallergenic, non-toxic, and skin-safe materials
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		Standards Compliance: ANSI S3.19, EN 352-2 Packaging: Individually sealed hygienic packs. Packaging and Labelling Requirements: Each PPE kit shall be individually vacuum-sealed in a sterile, tamper-proof poly pack. Clearly labelled with manufacturer details, batch number, date of manufacture, and expiry date. Usage instructions and applicable compliance standards must be printed in both English and Tamil (for local distribution). Minimum shelf life of 24 months under recommended storage conditions (ambient temperature, humidity <60%). Regulatory & Certification Requirements: All components shall be sourced from certified manufacturers with valid ISO 9001 and ISO 13485 certifications. CE marking / BIS / FDA / NIOSH approvals as applicable must be submitted with compliance documentation. Preference will be given to PPE kits conforming to WHO or CDC interim guidelines for occupational safety in environmental and public health settings.
25.	Digital clock	2 Nos. to be provided. 1 No in the driver cabin and 1 No in laboratory.
26.	Thermo hygrometer	Make HTC: Model:Thermohygro Clock; with Jumbo display, alarm, calendar
27	Rechargeable Torch Flashlight	Ultra Bright LED, 20 Watts – 1 no
28.	Infrared Thermometer	To measure surface temperature in water bodies – 1 no.
29.	Display unit	High definition 43” for bigger flat LED TV (2 Nos) with mounts both in interior and exterior of the vehicle. One external standalone mount for TV for placement in the field. Resolution: 3890X2160 4K UHD
30.	Storage shelf	A dedicated storage shelf shall be provided within the mobile laboratory for the secure and organized placement of personal belongings of field analysts and technical staff.

2.2.0 Water Quality Monitoring Instruments-

2.2.1 Technical Specification for pH Meter

S. N	Instrument:	Bench top pH Meter
1.	Automatic Buffer Recognition:	Required
2.	Calibration Intervals:	2 hours to 7 days
3.	Communication:	Integrated USB A and B
4.	Compliance Certifications:	CE WEEE
5.	Calibration Standards:	Required (4.0, 7.0, 10.0)
6.	Data Export:	Download via USB connection to PC
7.	Data Memory:	500 records or above
8.	Data Storage:	Automatic, data stored with calibration details
9.	Display:	LCD/ LED with backlight illumination
10.	Electrode Stand:	Required (mandatory)
11.	GLP Features:	Date, Time, Sample ID, Operator ID
12.	IP Rating:	IP54 or above
13.	Electrode Calibration:	Required
14.	Language/s:	English
15.	Operating Humidity:	90% relative humidity (non-condensing)
16.	Operating Interface:	Soft Touch Keypad
17.	Operating Temperature:	0 to 60°C
18.	pH Electrode calibration:	3 points
19.	pH Measurement Range:	0-14 pH
20.	pH Resolution:	Selectable 0.001/ 0.01/0.1
21.	Probes:	Required
22.	Temperature Compensation:	Automatic Temperature Compensation
23.	Temperature Range:	10°C to 110°C
24.	Temperature Resolution:	0.1
25.	Type of Measurement:	Lab Water Quality
26.	Warranty:	36 Months or above

S. N	Instrument: Laboratory General Purposes Refillable pH Electrode	(Intellical or equivalent)
1.	Accuracy:	± 0.02
2.	Application:	Clean and dirty Samples
3.	Cable Length:	1 m or above
4.	Electrode Type:	Refillable Reference Element
5.	Filling Solution:	Required
6.	Range:	0 to 14
7.	Reference Type:	Ag/AgCl
8.	Resolution:	0.001/0.01/0.1
9.	Sensor material:	Zeonor or equivalent
10.	Sensor Type:	pH glass
11.	Temperature Accuracy:	± 0.3
12.	Temperature Range:	0 to 50°C
13.	Temperature Resolution:	0.1°C

2.2.2. Technical Specification for Conductivity Meter

S. N	Feature	Specification
1.	Instrument	Benchtop Conductivity Meter
2.	Automatic Buffer Recognition	Required
3.	Calibration Intervals	2 hours to 7 days
4.	Communication	Integrated USB A and B
5.	Compliance Certifications	CE WEEE
6.	Custom Calibration Standards	Required
7.	Data Export	Download via USB connection to PC
8.	Data Memory	500 records or above
9.	Data Storage	Automatic, data stored with calibration details
10.	Display	LCD/ LED with backlight illumination
11.	Electrode Stand	Required
12.	GLP Features	Date, Time, Sample ID, Operator ID
13.	IP Rating	IP54 or above
14.	Electrode Calibration	Required
15.	Language/s	English
16.	Operating Humidity	90% relative humidity (non-condensing)
17.	Operating Interface	Soft Touch Keypad
18.	Operating Temperature	0 to 60°C
19.	Conductivity Electrode Calibration	2 - 5 points
20.	Conductivity Measurement Range	0.01 μ S/cm – 200 mS/cm
21.	Conductivity Resolution	0.01 μ S/cm – 0.1 mS/cm
22.	Probes	Required
23.	Temperature Compensation	Automatic Temperature Compensation
24.	Temperature Range	-10°C to 110°C
25.	Temperature Resolution	0.1°C
26.	Type of Measurement	Lab Water Quality

27.	Warranty	36 Months or above
28.	Instrument	Laboratory 4-Poles Graphite Conductivity Cell
29.	Accuracy: Conductivity	± 0.5% of reading
30.	Accuracy: Salinity	±0.1, ±1 digit
31.	Accuracy: TDS	±0.5% ±1 digit
32.	Application	Clean and dirty Samples
33.	Cable Length	1 m or above
34.	Electrode Type	Conductivity Cell 4 poles- Graphite
35.	Range: Conductivity	0.01μS/cm – 200 mS/cm
36.	Range: TDS	0.00 mg/L to 50.0 g/L as NaCl
37.	Range: Salinity	0 to 42 ppt
38.	Resistivity	2.5Ωcm - 49MΩcm
39.	Resolution	0.01/0.1 (5 digits)
40.	Sensor material	Noryl or equivalent
41.	Sensor Type	4 – poles conductivity probe, Graphite, k=0.40cm ⁻¹
42.	Temperature Accuracy	±0.3°C
43.	Temperature Range	-10 to 110°C
44.	Temperature Resolution	0.1°C

2.2.3. Turbidity Meter

S. No.	Specifications	Requirement
1.	Type of system	Portable
2.	Material and finish	MS Powder coated, Plastic, Stainless steel
3.	Display	LED
4.	Range Selection	Both automatic and manual
5.	Range minimum	0-1000 NTU in four ranges, 0.00 to 4000 NTU Automatic
6.	Accuracy	±2% full scale at 1 and 1000 NTU
7.	Power requirement	230 Volts, 50 Hz
8.	Connectivity for data export	Required USB
9.	Accessories	Cuvetts, Cuvett Stand, Dust cover, Instrument Manual, Plug, Power cable, Turbidity standard
10.	Warranty	3 Years
11.	Conformity of Standards	BIS, CE, NIST, TUV
12.	Certifying Agency	NABL
13.	Measurement Mode	Normal, Average, Continuous
14.	Min range parameter	0-1, 0-10, 0-100, 0-1000 NTU, 100-4000 NTU
15.	Detector	Photodiode, Silicon Photocell
16.	Lamp life	At least 100,000 readings

2.2.4. Dissolved Oxygen Meter

S. No.	Instrument	Benchtop Dissolved Oxygen Meter
1.	Automatic Buffer Recognition:	Required
2.	Calibration Intervals:	2 hours to 7 days
3.	Communication:	Integrated USB A and B
4.	Compliance Certifications:	CE WEEE
5.	Custom Calibration Standards:	Required
6.	Data Export:	Download via USB connection to PC
7.	Data Memory:	500 records or above
8.	Data Storage:	Automatic, data stored with calibration details
9.	Display:	LCD/ LED with backlight illumination
10.	Electrode Stand:	Required
11.	GLP Features:	Date, Time, Sample ID, Operator ID
12.	IP Rating:	IP54 or above
13.	Electrode Calibration:	Required
14.	Language/s:	English
15.	Operating Humidity:	90% relative humidity (non-condensing)
16.	Operating Interface:	Soft Touch Keypad
17.	Operating Temperature:	0 to 60°C
18.	DO Electrode calibration:	2-5 points
19.	DO Measurement Range:	0.1-20.0 mg/L (ppm) 1-200% Saturation
20.	DO Resolution:	0.1
21.	Probes:	Required

22.	Temperature Range:	10°C to 110°C
23.	Temperature Resolution:	0.1
24.	Type of Measurement:	Lab Water Quality
25.	Warranty:	36 Months or above
S. No.	Instrument:	Laboratory Luminescent/Optical Dissolved Oxygen Sensor
1.	Accuracy:	± 0.1mg/L
2.	Application:	Marine, Freshwater and wastewater Samples
3.	Cable Length:	1 m or above
4.	Electrode Type:	Luminescent Dissolved Oxygen
5.	Range:	0.05 to 20 mg/L 1-200% Saturation
6.	Resolution:	0.01/0.1
7.	Sensor material:	Polycarbonate/ABS or equivalent
8.	Sensor Type:	Lumiphore
9.	Temperature Accuracy:	±0.3°C
10.	Temperature Range:	0 to 50°C
11.	Temperature Resolution:	0.1°C

2.2.5. Technical Specifications – Digital Reactor Block for COD Analysis.

Sl. No.	Parameter	Detailed Specification Requirement
1	Type of Equipment	A microprocessor-controlled digital reactor block (laboratory digestion system) suitable for thermal digestion of water, wastewater, soil, and related environmental samples, with programmable temperature and time functions.
2	Construction and Design	Compact bench-top design with robust, corrosion-resistant outer housing. The unit shall be provided with: • A protective hinged lid resistant to high temperature. • Sample vial slots configured to accept standard digestion vials of 16 mm and 20 mm diameter. • Protective earth connection and insulation in conformity with international laboratory safety standards.
3	Overall Dimensions	Approx. 250 mm (W) × 145 mm (H) × 310 mm (D) or equivalent.
4	Weight	Not exceeding 3.0 kg (net) and 4.5 kg (gross, including packaging).
5	Operating Conditions	• Ambient temperature: 10 – 45 °C • Storage temperature: –40 to +60 °C • Relative humidity: Up to 90% RH, non-condensing.
6	Temperature Control	• Programmable temperature range: 37 °C to 165 °C. • Temperature stability and reproducibility: ± 2 °C. • Heating rate: 20 °C to 150 °C within 10 minutes.
7	Programmable Timer	Digital timer programmable from 0 to 480 minutes with: • Automatic termination of heating cycle. • Acoustic alarm at cycle completion. • Automatic safe cooling after completion.

8	Pre-set (Factory Stored) Programs	The reactor block shall be provided with pre-stored digestion programs, including but not limited to: • COD program: 150 °C for 120 minutes. • TOC program: 105 °C for 120 minutes. • 100 °C program: selectable for 30, 60, or 120 minutes. • 105 °C program: selectable for 30, 60, or 120 minutes. • 150 °C program: selectable for 30, 60, or 120 minutes. • 165 °C program: selectable for 30, 60, or 120 minutes.
9	User Programmability	The system shall allow storage and recall of a minimum of three user-defined programs with individually settable temperature (37–165 °C) and time (0–480 min).
10	Sample Holding Capacity	Configurable models with following options: • 9 to 21 vial positions for 16 mm digestion vials. • 2 to 4 vial positions for 20 mm digestion vials.
11	Display and Interface	Clear digital display showing: • Real-time block temperature. • Remaining time of digestion cycle. • Error or fault codes. Operation through soft-touch or membrane control keys.
12	Power Requirements	• Input voltage: 100–240 V AC, $\pm 10\%$, 50/60 Hz. • Power consumption: Maximum 600 VA. • Protection Class I, with earth-ground connection.
13	Safety Features	• Over-temperature protection with automatic shut-off. • Protective earth grounding. • Insulated block design to minimize operator exposure to hot surfaces. • Compliance with international laboratory safety and EMC standards (EN, IEC, UL, CSA equivalent).
14	Certifications &	The instrument shall conform to: • IEC/EN 61010 for laboratory equipment safety.

	Standards	• IEC/EN 61326 for electromagnetic compatibility. • CE or equivalent international conformity.
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2.2.6. Technical Specifications – Field testing kit

S. No.	Instrument	Specifications
1.	Field testing kit	To analyze Iron, Ammonia, Nitrite, Nitrate and Phosphate, Fluoride, Residual Chlorine, H ₂ S vials for Bacteriological examination – 3 Nos from TWAD Board

2.2.7 Sample Collection kit (Niskin and surface sampler)

S. No.	Specification	Description
1.	Capacity	5.0Litre
2.	Use	for river, pond, lake surveys capable of collecting water sample from unlimited water depth
3.	Essential components	End stoppers, handles and cable clamp blocks (PVC). Derlin stopcock and air vent screw for smooth removal of water from the sampler. The end stoppers on a band of latex tubing. The stoppers and PVC body should have chamfered surface held firmly against 'O' ring seals by internal latex tubing. The triggering mechanism should be of push rod type and triggered by brass messenger. All springs made out of stainless steel. With at least two messengers

2.3. Chest Freezer

S. No.	Parameter	Specification Requirements
1.	Type	Compact, Portable, Laboratory-Grade Mini Freezer
2.	Capacity	Minimum 40 to 80 Litres
3.	Cooling Technology	CFC-free compressor-based refrigeration system with rapid cooling capability
4.	Temperature Range	Adjustable up to -20°C, suitable for preservation of biological and chemical environmental samples
5.	Temperature Stability	±1°C or better
6.	Control System	Digital temperature controller with LCD/LED display and programmable settings
7.	Power Supply	Operable on 12V/24V DC and 230V AC , with built-in power management system (UPS/genset)
8.	Energy Consumption	Low power consumption, energy-efficient with auto-cutoff and eco-mode
10.	Material of Construction	Outer Body: Corrosion-resistant, powder-coated mild steel or ABS plastic Inner Chamber: Stainless Steel (SS304)
11.	Insulation	High-density PUF (Polyurethane Foam) insulation, minimum 60 mm thickness
12.	Refrigerant Type	Eco-friendly refrigerant (CFC/HCFC-free), R600a or equivalent
13.	Portability Features	Lightweight, shockproof build with lockable caster wheels and carry handles
14.	Safety Features	Overload protection, over-temperature alarm, door lock, and voltage surge protection

15.	Sample Storage Configuration	Modular, removable sample racks or baskets; compatible with sample vials/test tubes/biological packs
16.	Ambient Operating Conditions	Capable of functioning efficiently in ambient temperatures ranging from 10°C to 50°C
17.	Noise Level	≤ 50 dB
18.	Certification & Compliance	CE / ISO / BIS compliant
19.	Warranty	Minimum 36 months onsite comprehensive warranty
20.	Documentation	User manual, calibration certificate, quality compliance certificates to be provided with the unit

2.4. Ice Box

S. No.	Parameter	Specification Requirements
1.	Type	Heavy-duty, insulated, laboratory-grade portable ice box
2.	Capacity	15 to 25 Litres (Net usable volume)
3.	Usage Purpose	Temporary preservation and cold storage of environmental samples (water, air filters, biological material)
4.	Material of Construction	Outer Body: High-impact food-grade HDPE/LLDPE Inner Chamber: Virgin-grade PP or HDPE
5.	Insulation	High-density PUF (Polyurethane Foam) insulation, minimum 30–50 mm thickness for thermal retention
6.	Thermal Efficiency	Capable of maintaining internal temperature between 2°C to 8°C for minimum 24 hours (with ice packs)
7.	Lid Design	Hinged/Removable air-tight lid with silicone rubber gasket and dual-locking mechanism
8.	Cooling Mechanism	Non-electric passive cooling; compatible with reusable PCM gel ice packs
9.	Portability	Ergonomically designed with foldable handles/strap for easy carriage; light-weight construction
10.	Drain Plug	Built-in leak-proof drain plug for easy removal of meltwater
11.	Sample Storage Arrangement	Removable inner rack or partitions for sample segregation; spill-proof interior design
12.	Durability	Shockproof, UV-resistant, corrosion-resistant body suitable for rugged outdoor field conditions
13.	Operating	Effective under ambient conditions from -10°C to 50°C

	Temperature Range	
14.	Stackability	Should be stackable for efficient storage in mobile lab units
15.	Accessories (Optional)	To be supplied with 2–4 reusable gel ice packs or PCM packs with specifications
16.	Compliance	Must conform to applicable WHO/UNICEF cold chain or ISO standards
17.	Warranty	Minimum 12 months warranty against manufacturing defects
18.	Documentation	Product data sheet, manufacturer's warranty certificate, user manual to be provided

2.5. Analytical Balance

Sl. No.	Requirement	Detailed Specification
1	Type of Equipment	Analytical Balance – digital, microprocessor controlled, high-precision instrument for laboratory use.
2	Capacity and Readability	Capacity: up to 300 g Readability: 0.001 g (1 mg)
3	Repeatability (Standard Deviation)	± 0.001 g or better
4	Linearity	± 0.002 g or better
5	Pan Size	Circular or square pan of minimum 80 mm diameter (or equivalent), made of stainless steel.
6	Calibration	Internal motorized calibration (preferred) or provision for external calibration with standard weights.
7	Response Time	Stable reading within 3 seconds or better.

8	Display	High-contrast backlit LCD / LED display with clear visibility in laboratory conditions.
9	Tare Range	Full capacity (up to 300 g).
10	Draft Shield	Transparent, anti-static glass or acrylic draft shield with at least 3 sliding doors (left, right, and top) for convenient sample handling.
11	Operating Temperature	10 – 40 °C, relative humidity ≤ 80% non-condensing.
12	Interface / Connectivity	RS-232 / USB interface for PC or printer connectivity; GLP/GMP compliant data transfer preferred.
13	Power Supply	Operates on AC adapter (230 V ± 10%, 50 Hz) with optional rechargeable battery backup.
14	Construction	Rugged ABS / metal housing with anti-vibration feet; leveling indicator (spirit bubble) and adjustable leveling screws.
15	Additional Features	- Overload protection system. - Automatic zero setting. - Built-in application modes such as percent weighing, piece counting, density determination, etc. (desirable).
16	Certifications	CE / ISO / BIS certified; shall comply with international laboratory safety and performance standards.

2.6. Air Quality Monitoring Instruments-

2.6.1. PM₁₀ and PM_{2.5} Sampler

Technical specification

Sr. No.	Instrument	Real Time Air Quality Monitor (Sensor -Based)
1.	Parameters	PM ₁₀ , PM _{2.5} , (In built Temperature & Relative Humidity)
2.	Operating Temperature	-30°C to 55°C
3.	Operating Humidity	15 to 95 %
4.	Power requirement	AC, 220V, 50/60 Hz along with Battery
5.	Data Logging	USB/ Micro SD card (8 GB and above) & cloud connectivity for real-time data transfer
6.	Power Backup	Minimum 8 hours with quick charging in <2 hours.
7.	Data Sampling frequency	60 Sec. or lesser
8.	Data Storage	Minimum 6 months

2.7. Flue gas analyzer

Sl. No.	Specification	Requirements			
1.	Gases to be measured	CO,O ₂ ,CO ₂ ,SO ₂ ,NO,NO ₂ ,H ₂ S and Combustion efficiency			
2.	Sensors	IR or Electro-chemical Sensors with high accuracy (CO, O ₂ ,CO ₂ should be measured directly with respective Individual sensors)			
3.	Measurable	Accuracy +/- 1°C			
4.	Operating Temperature	0-50 0 C (The instrument should be capable to handle high temperature and moisture through inbuilt Thermoelectric Chillers with Automatic Condensate Removal system for accurate measurement).			
5.	Power Supply	Rechargeable Li-ion Battery along with built-in charger And Power adopter230V ± 10V AC; 50Hz AC.			
6.	Flue Gas Probe	Suitable metallic probe to withstand 12000C temp with Insulated handle.			
7.	Probe Length	Minimum 01 M (39.37inch) stainless steel or more: minimum hose length 2m or more with Piston Grip.			
8.	Memory	Internal Memory for Data Storage (1000Tests)			
9.	Pre-Programming	For Natural gas, light oil, heavy oil, LPGs, Propane, Butane, Coke, Coal, etc.			
10.	Display	LCD display screen.			
11.	Sensors specifications				
	Parameter	Sensor	Range	Resolution	Accuracy

	Flue Temperature	----	20°C-1200 °C	0.1° C	0.1°(C)± 0.3% of reading
	Inlet Temperature	----	0-1200 °C	0.1° C	0.1°(C) ±0.3% of reading
	Oxygen (O2)	Electro chemical	0-21 % V	0.1 % V	0.2% vol.
	Carbon Monoxide (CO)	Electro chemical	0-5,000 ppm	1 ppm	± 4% of reading up to < 2000 ppm ± 10% of reading > 2000 ppm
	Carbon Dioxide (CO2)	NDIR	0-20.0%	0.10%	±0.3 reading
	Carbon Monoxide	NDIR	0-15%	0.01%	±0.3 reading
	Nitric Oxide	Electro chemical	0-4000 PPM	± 1 PPM	± 5 PPM < 100 PPM ; 5% > 100 PPM
	Nitrogen Dioxide	Electro chemical	0-1000 PPM	± 1 PPM	± 5 PPM < 100 PPM ; 5% > 100 PPM
	Sulphur Dioxide	Electro chemical	0-4000 PPM	± 1 PPM	± 5 PPM < 100 PPM ; 5% > 100 PPM
	Hydrogen Sulphide	Electrochemical	0-500 PPM	± 1 PPM	± 5 PPM for < 100 PPM ; ± 5% for > 100 PPM
	Hydrocarbon (HC)	NDIR	0-10,000 PPM	0.01 - 1 PPM	±5% of reading
	Efficiency	Calculated	0-100 %	0.10%	±1%
	NO _x	Calculated	0-5000 PPM	± 1 PPM.	-----

	Pressure / Draft	Bridge	0-150 mbar	0.01 mbar / kpa.	±0.05% Full scale
12.	Software/ Operator		Easy to handle keyboard operated and user friendly. PC Software Package with Bluetooth Adapter & USB Cable Wireless Communications with PC & other Windows Compatible devices.		
13.	Weight		Portable Light weight housed in sturdy carrying case.		
14.	Calibration certificate		Calibration and certificate of approval from recognized International agency like EPA, TUV be provided.		
15.	Documents		Instruction manual for operation. Circuit details for each Electronic card for repair and maintenance.		
16.	Warranty period		Comprehensive warranty period for 2 years.		
17.	Calibration Certificate		Calibration Certificate from NABL approved lab to be provided		

2.8. Multi gas detector

MULTI GAS HAND HELD METER MEASURING VOCs, H₂S, CO

Sl. No.	INSTRUMENT SPECIFICATIONS	
1.	SENSORS	Default sensor-VOC, H₂S, CO, LEL, O₂ Measurement range as in the sensors list interchangeable field-replaceable sensors including PID for VOCs, electrochemical sensors for toxic gases and oxygen, combustible LEL and NDIR sensors, and CO₂ NDIR sensor as per the list attached. PID Specification for VOC 10.6 EV (EXT RANGE) - (0 to 5,000 ppm range, 0.1 ppm resolution) Man Down Alarm with real-time remote wireless notification Compliant with MIL-SPEC-810G performance standard Fully automatic bump testing and calibration advantage interchangeable sensor options (such as PID, NDIR for combustibles and CO₂, ammonia, chlorine, formaldehyde, and phosphine) to fully meet the monitoring needs in a variety of applications
2.	BATTERY OPTIONS, RUNTIMES AND RECHARGE TIME	Rechargeable Li-ion (~12-hr runtime, <6-hr recharge time) Extended duration Li-ion (~18-hr runtime, <9-hr recharge time) Alkaline adapter with 4 x AA batteries (~6-hr. runtime)
3.	DISPLAY	Monochrome graphical LCD display (128 x 160) with backlighting. Automatic screen "flip" feature.
4.	DISPLAY READOUT	Real-time reading of gas concentrations, PID measurement gas and correction factor, Man Down Alarm on/off, visual compliance indicator, battery status, datalogging on/off, wireless on/off and reception quality STEL, TWA, peak, and minimum values

5.	KEYPAD BUTTONS	3 operation and programming keys (Mode, Y/+, and N/-)
6.	SAMPLING	Built-in pump Average flow rate: 250 cc/min. Auto shutoff in low-flow conditions
7.	CALIBRATION	Automatic Test and Calibration System or manual OR EQUIVALENT ADVANTAGE OF SUPPLIED INSTRUMENT
8.	ALARMS	Wireless remote alarm notification, audible (95 dB @ 30 cm), vibration, visible (flashing bright red LEDs), and on-screen indication of alarm conditions Man Down Alarm with pre-alarm and real-time remote wireless notification
9.	DATALOGGING	Continuous datalogging (6 months for 5 sensors at 1-minute intervals, 24/7) User-configurable datalogging intervals (from 1 to 3,600 seconds)
10.	COMMUNICATION AND DATA DOWNLOAD	Data download and instrument set-up and upgrades on PC via desktop charging and PC comm. cradle, travel charger, Automatic Test and Calibration System OR EQUIVALENT ADVANTAGE OF SUPPLIED INSTRUMENT
11.	OPERATING TEMPERATURE	-4° to 122°F (-20° to 50°C)
12.	HUMIDITY	0% to 95% relative humidity (non-condensing)
13.	DUST AND WATER RESISTANCE	IP-65 ingress protection rating (dust-tight and waterproof against hosing jets coming from all directions)
14.	SAFETY CERTIFICATIONS	CSA: Class I, Division 1, Groups A, B, C and D, T4 Class II, Division 1, Groups E, F, G, T85°C ATEX: 0575 II 1G Ex ia IIC T4 Ga 2G Ex ia d IIC T4 Gb with IR Sensor installed M1 Ex ia I Ma

		IECEX: Ex ia IIC T4 Ga Ex ia d IIC T4 Gb with IR Sensor installed M1 Ex ia I Ma IECEX/ANZEx: Ex ia IIC T4 Ga Exia d IIC T4 Gb with IR Sensor installed Ex ia I Ma
15.	EMC/RFI	EMC directive: 2004/108/EC
16.	PERFORMANCE TESTS	MIL-STD-810G and 461F compliant. LEL CSA C22.2 No. 152, ISA-12.13.01
17.	LANGUAGES	English
18.	WARRANTY	Four years on Liq O2 sensors OR HIGH Three years on CO and H₂S sensors OR HIGH Two years on non-consumable components and catalytic LEL sensors OR HIGH One year on all other sensors, pump, battery, and other consumable parts OR HIGH

Interchangeable sensors list (Single Gas)			
Sr. No.	SENSOR SPECIFICATIONS	RANGE	RESOLUTION
PID SENSORS			
1.	VOC 10.6 EV (EXT. RANGE)	0 to 5,000 ppm	0.1 ppm
COMBUSTIBLE SENSORS			
2.	CATALYTIC LEL	0 to 100% LEL	1% LEL
3.	NDIR (0-100% LEL METHANE)	0 to 100% LEL	1% LEL
4.	NDIR (0-100% VOL METHANE)	0 to 100% Vol.	0.1% Vol.
CARBON DIOXIDE SENSOR			
5.	CARBON DIOXIDE (CO ₂) NDIR	0 to 50,000 ppm	100 ppm
ELECTROCHEMICAL SENSORS			
6.	AMMONIA (NH ₃)	0 to 100 ppm	1 ppm
7.	CHLORINE (Cl ₂)	0 to 50 ppm	0.1 ppm
8.	HYDROGEN SULFIDE (H ₂ S)	0 to 100 ppm	0.1 ppm
9.	METHYL MERCAPTAN (CH ₃ -SH)	0 to 10 ppm	0.1 ppm

2.9. Meteorological Instruments

Technical specification

S. No.	Weather monitoring Sensors	Specification	
1.	Ambient Temperature	Range	-10 to 60 deg C
		Accuracy	± 0.2 deg C or better (with radiation Shield)
		Response	10 seconds in still air
		Resolution	0.1 deg C
		Sensor Type	Resistance type
		Response Time	10 sec or better
2.	Relative Humidity	Range	0-100%
		Accuracy	±3.0 % or better
		Resolution	0.1%
		Sensor Type	Capacitive/ Solid state
		Response Time	10 sec or better
		Operating Temp	0 to 60 deg C
3.	Wind Direction	Range	0-355 degrees electrical & 0-360 degrees mechanical
		Accuracy	±3 degrees
		Resolution	1 degree
		Sensor Type	Ultrasonic
		Threshold	0.5 m/sec or less
		Response Time	10 sec or better
		Operating Range	0 to 55 deg C

4.	Wind Speed	Range	0 to 60 m/s or better
		Sustainability	Up to 75 m/sec
		Accuracy	± 0.5 m/sec
		Resolution	0.1 m/sec
		Sensor Type	Ultrasonic
		Threshold	0.5 m/sec or less
		Response Time	10 sec or better
		Operating Temp	0 to 55 deg C
5.	Rainfall	Range	0.2 mm to 100 mm/hr
		Accuracy	+/- 5% or better
		Resolution	0.2 mm of rainfall
		Sensor Type	Tipping bucket rain gauge or any other suitable sensor
		Response Time	10sec or better
		Collecting Area	310 sq. cm
6.	Solar Radiation	Range	0 to 1500 W/m ² or better
		Accuracy	$\pm 3\%$
		Resolution	1W/m ²
		Sensor type	Silicon Photo diode
		Working environment	40°C~60°C, 0~95%RH (non-condensing)
		Sensitivity	7~14 $\mu\text{V}\cdot\text{W}^{-1}\cdot\text{m}^2$
		Internal resistance	about 300 Ω

		Response time (99%)	≤30s
		Measurement range	0 to 1000 µg/m ³

2.10. Noise Level Meter

S. No.	Specifications	Requirement
1.	Measurement Range	20-140 dB RMS in a single measurement range without the need for switching
2.	Accuracy	Class 1, IEC 61672-1:2013
3.	Simultaneous Measurement	A, C, and Linear (Z) – RMS and Peak Both
4.	Measurement Types	Leq, Sound Exposure Level (LAE), LAF Min, LAF Max, Laeq with date and time
5.	Monitoring Parameters	Leq, L10, L90, L50, LMax, and LMin
6.	Display	Colour display with update period of 0.5 seconds
7.	Microphone	½ Class 1, pre-polarised
8.	Internal Clock	For date and time
9.	GPS Facility	Inbuilt GPS facility to be provided in sound level meter
10.	Power Source	Alkaline or rechargeable cells with at least 11 hrs of backup
11.	Printer Compatibility	Compatible mini dot matrix printer with 2-inch wide printing mechanism

12.	Enclosure Body	PC ABS (polycarbonate/acrylonitrile butadiene styrene), rugged, weight not more than 350 gms (including batteries)
13.	Operating Temperature Range	10°C to 50°C
14.	Storage	Minimum 2GB inbuilt memory / minimum 750 runs storage
15.	Calibration	Model number should be calibrated by NPL India
16.	Field Calibration	Auto calibration by application of 1 kHz calibrator, nominal level 114/94 dB (+/- 1 dB). Separate calibrator to be provided. Sound level meter should detect calibrator and get calibrated automatically (user-friendly)
17.	Record Printout	From printer to come with date and time of pre and post calibration of noise measurement
18.	Overall, Weight of Kit	Should not exceed more than 3 kgs
19.	Warranty	2 years
20.	Comprehensive Warranty	3 years
21.	Additional Requirement	Tripods, Technical brochure of the product offered model shall be furnished

2.11 Micro Biology sampling bottle (Tarson): Sterile, autoclavable or single-use sampling bottles HDPE with PP closure (100 mL, 250 mL)

2.12. Rugged Laptop

S. No.	Parameter	Specification
1.	Processor	Intel® Core™ i5 or i7, 11th or 12th Generation (Quad Core, ≥2.4 GHz base speed)
2.	Operating System	Windows 11 Pro 64-bit
3.	Memory (RAM)	Minimum 16 GB DDR4 (Expandable to 64 GB)
4.	Storage	512 GB SSD (NVMe PCIe), Shock-mounted, Removable
5.	Display	14" or 12" Sunlight-readable Full HD Touchscreen (1000–1200 nits brightness)
6.	Touch Capability	Glove & Rain-Compatible Capacitive Multi-Touch
7.	Graphics	Intel® Iris® Xe Graphics or Integrated UHD (optional discrete GPU)
8.	Keyboard	Backlit, spill-resistant with multi-language support
9.	Battery Life	Minimum 12 hours (standard battery) – Hot-swappable dual battery support
10.	Charging Time	<3 hours for full charge (standard battery)
11.	Camera	Integrated HD Webcam with Privacy Shutter
12.	Audio	Dual Microphones, High-quality speakers, Noise-cancelling features
13.	Ports	• 2 x USB 3.2

		• 1 x USB-C / Thunderbolt™
		• 1 x HDMI
		• 1 x RJ-45 Ethernet
		• 1 x SDXC Card Slot
		• Optional Serial Port (RS-232)
14.	Connectivity	• Wi-Fi 6 or 6E
		• Bluetooth 5.1 or higher
		• Optional 4G LTE / 5G with SIM Slot
		• GPS / GNSS support (u-blox or equivalent)

2.13. CCTV Camera

Sr. No.	Parameter	Minimum Requirement
1	Camera Type	IP-based Dome Camera (Indoor, vandal-resistant, vehicular grade)
2	Image Sensor	1/2.8" Progressive Scan CMOS or superior
3	Effective Resolution	≥ 2 Megapixel (1920 × 1080p), scalable up to 4 MP or better
4	Lens	2.8 mm fixed/wide-angle lens, FOV ≥ 110°
5	Illumination	Integrated IR LEDs with effective night vision range ≥ 20 m
6	Day/Night Function	True Day/Night with ICR (IR Cut Filter Removable)
7	Frame Rate	Real-time 25/30 fps @ full resolution
8	Video Compression	H.265 / H.264, dual stream encoding
9	Storage Compatibility	On-board microSD card slot (≥ 128 GB) and NVR integration with min. 1 TB HDD
10	Audio Functionality	Built-in microphone or audio input provision (preferred)
11	Connectivity	RJ-45 Ethernet, PoE (IEEE 802.3af) support
12	Power Requirement	12 V DC ±10% / PoE
13	Environmental Conditions	Operating Temp. 0 °C to +50 °C; RH ≤ 90% non-condensing
14	Mounting Arrangement	Ceiling/Wall mount with anti-vibration fixtures suitable for vehicular movement

15	Protection Grade	Minimum IP65 (Ingress protection), IK10 vandal resistance
16	Certification & Compliance	CE / FCC / BIS certified; RoHS compliant
17	Accessories	Factory-fitted mounting brackets, power adapters (if required), Ethernet cabling, and all associated hardware

2.14. Dashcam

Sl. No.	Parameter	Minimum Requirement
1	General Requirement	Automotive grade dash camera for continuous video recording, tamper-proof, with mounting accessories for windshield/cabin.
2	Video Resolution	Minimum Full HD 1080p @ 30 fps; support for 2K/4K preferred.
3	Lens & View	Wide-angle lens $\geq 140^\circ$ field of view.
4	Night Vision	Infrared/Low-light recording with WDR (Wide Dynamic Range) technology.
5	Recording Mode	Continuous loop recording with overwrite protection; Event-based recording on impact/sudden braking.
6	Storage	Minimum 64 GB Class 10/UHS-I microSD card, expandable up to 256 GB.
7	File Format	Standard MP4/AVI with date, time, and GPS stamping.
8	Data Protection	Automatic file lock during event/accident to prevent overwriting.
9	Data Transfer	USB 3.0 / Wi-Fi connectivity; Cloud support preferred.
10	GPS & Tracking	Integrated GPS for speed, direction, and location logging; compatible with vehicle tracking system.
11	Power Supply	12V DC from vehicle; low-power design.
12	Backup Power	In-built supercapacitor/Li-Poly battery for safe shutdown.
13	Operating Temperature	-10°C to $+60^\circ\text{C}$.
14	Durability	Vibration & shock resistant, ISO 16750 compliant.
15	Display	Minimum 2.0" LCD screen for playback/configuration.
16	Audio	Built-in microphone & speaker.
17	User Interface	Multi-language support, password protection for access.
18	Mounting	Secure suction/adhesive bracket; hardwire kit for concealed wiring.
19	Accessories	Power cable with fuse, GPS antenna (if external), 128 GB memory card, manuals, warranty card.

20	Certification	BIS/ISO/IEC compliance, EMC/EMI compliant.
21	Warranty	Minimum 2 years comprehensive warranty with on-site support.
22	Dual Camera	Front + Cabin/Rear camera for in-van monitoring.
23	Parking Mode	Motion detection & recording during vehicle standstill.
24	G-Sensor	Shock/impact detection for automatic recording.
25	Remote Monitoring	Integrated 4G/LTE module with cloud dashboard access.

2.15. Canopy Awning-

Sl. No.	Parameter	Minimum Requirement
1	Type	Electrically controlled retractable canopy awning with provision for manual operation (override) in case of motor/electrical failure.
2	Vehicle Compatibility	Suitable for installation on the prescribed Van (high roof body type).
3	Dimensions	Minimum length: 3.5 – 4.0 meters (covering majority of van side profile). Projection (extension): 2.0 – 2.5 meters.
4	Operation	Remote-controlled/ switch-controlled electric extend & retract system with smooth, noiseless functioning.
5	Manual Override	Crank-handle/manual gear provision for operation during technical/electrical failure.
6	Material – Frame	High-strength powder-coated Aluminium alloy/galvanized steel with anti-corrosion coating.
7	Material – Fabric	UV-resistant, waterproof, fire-retardant acrylic/PVC coated fabric, 500–600 GSM, color fastness rating ≥ 7 , resistant to fading and weathering.
8	Wind Resistance	Designed to withstand wind speed of at least 40 km/h; recommended with wind sensor/automatic retraction system.
9	Drainage	Integrated water run-off design to prevent water logging/sagging.
10	Mounting	Roof-mounted, with robust brackets customized for the prescribed van body structure; vibration-resistant installation.
11	Power Supply	12V/24V DC compatible with vehicle electrical system.
12	Safety Features	- Auto stop on obstruction. - Manual emergency retraction option.
13	Accessories	Standard accessories including manual crank handle, mounting brackets, control switch, wiring harness, installation hardware.

14	Certification	Materials conform to BIS/ISO standards for fire safety, UV resistance, and structural integrity.
15	Warranty	Minimum 2 years comprehensive warranty covering motor, fabric, and structure.
16	Optional Features	- Wind sensor for automatic retraction. - LED strip lighting integrated under canopy for illumination.

2.12. Compact Document Scanner (Portable Type)

1. General Requirements:

Requirement	Specification
Type	Ultra-compact, portable sheet-fed document scanner, designed for mobile and office use, enabling fast digitization of single sheets and small batches.
Scanning Technology	Contact Image Sensor (CIS) or Charge Coupled Device (CCD) technology ensuring high-quality, distortion-free digital capture.
Optical Resolution	Not less than 600 × 600 dpi true optical resolution (interpolated resolutions not acceptable as a substitute).
Scanning Speed	Minimum 8 pages per minute at A4 size, 300 dpi, colour mode. Higher speed is acceptable and preferable.
Supported Media Sizes	Shall support multiple international and standard sizes including: A4, A5, A6, B5, Letter, and Legal.
Paper Handling	Single-sheet automatic document feeder or manual sheet feed mechanism suitable for field scanning.
Output File Formats	JPEG, TIFF, PNG, and PDF (including searchable PDF with OCR capability).
Connectivity	USB 2.0 or higher (with preference for USB-powered operation). Optional wireless connectivity (Wi-Fi) shall be considered an advantage.

Operating System Compatibility	Fully compatible with both Microsoft Windows and Mac OS platforms. Shall be compliant with industry-standard drivers such as TWAIN, WIA, and ISIS for broad software integration.
Dimensions	Compact and lightweight design, suitable for mobile/field deployment; preferably ≤ 30 cm in length and easily portable.
Power Source	USB-powered preferred. External adapter option to be available for vehicle/mobile setups.
Bundled Software	OEM-provided scanning suite with full-featured Optical Character Recognition (OCR) capability for creating editable/searchable documents.
Certifications	Equipment shall conform to internationally recognized standards including CE, FCC, and RoHS certifications.

2.13.Colour Inkjet Printer (Compact, Mobile-Suitable)

General Requirements:

Sl. No.	Requirement	Detailed Specification
1	Type	Portable, compact colour inkjet printer, designed for mobile and office use; lightweight and easily transportable.
2	Print Technology	Thermal Inkjet or Drop-on-Demand technology, ensuring sharp, high-quality output in both monochrome and colour modes.
3	Print Resolution	True optical resolution of minimum 4800×1200 dpi in colour; lower resolutions not acceptable.
4	Print Speed	Minimum 8 ppm (black) and 5 ppm (colour) in accordance with ISO/IEC 24734 or equivalent standard test methodology.

5	Functions	Shall perform print-only operation for compact use. Multifunction features (print/scan/copy) may be accepted as optional value addition.
6	Supported Media Sizes	A4, A5, B5, Letter, Legal, and standard Envelopes.
7	Media Handling Capacity	Input tray capacity shall not be less than 50 sheets (80 gsm).
8	Connectivity	Standard USB 2.0 interface. Wireless connectivity via Wi-Fi Direct is mandatory; Bluetooth support is desirable/preferred.
9	Power Supply	Operation through AC adapter. Optional rechargeable battery pack shall be available for mobile/field operation.
10	Dimensions	Compact size, with overall width not exceeding 350 mm, suitable for field mobility.
11	Operating System Compatibility	Full driver/software support for Windows and Mac OS. If Wi-Fi enabled, shall also support Android and iOS platforms for mobile printing.
12	Ink Cartridge System	Shall operate with either individual colour cartridges or combined colour cartridge system. OEM-supplied cartridges are recommended for quality assurance and warranty compliance.
13	Certifications	The equipment shall conform to internationally accepted safety and environmental standards, including: CE, BIS, and Energy Star certifications.

2.14. Portable Generator Specifications

S. No.	Engine	
1.	Air Cleaner	Dual type
2.	Bore X Stroke (mm)	88 x 64
3.	Compression ratio	8.2:1
4.	Cooling System	Forced air
5.	Displacement (cm³)	389
6.	Fuel Tank Capacity (L)	19 or more
7.	Fuel Type	Unleaded Petrol
8.	Ignition System	Full Transistor Ignition
9.	Noise Level	90 dB or less
10.	Oil Capacity	1.1 Liter
11.	Spark Plug	BPR6ES (NGK) or equivalent
12.	Starting System	Recoil & Push Button Start
13.	Dry Weight (kg)	125 or Lesser
14.	Continuous running hours (Hrs.)	6.5 or more
15.	Dimensions (L x W x H)	1261 x 680 x 722
16.	Type	4 stroke, overhead valve, single cylinder
17.	Lubrication	Forced spray system
18.	Rated Output (VA)	5500 or more
19.	Maximum Output (VA)	7000 or more

2.15. Standard Reference Books for Environmental Laboratory Operations

The Tenderer is required to supply the following standard reference books, which are essential for laboratory analysis, methodological guidance, and compliance with national and international standards in water, wastewater, and air quality monitoring:

1. **Standard Methods for the Examination of Water and Wastewater, 24th Edition**

- **Editors:** William C. Lipps, Ellen Burton Braun-Howland, and Terry E. Baxter
- **Publisher:** American Public Health Association (APHA), in association with American Water Works Association (AWWA) and Water Environment Federation (WEF)
- **Scope:** Comprehensive compendium of standardized laboratory and field methods for the examination of water and wastewater, including chemical, physical, and microbiological analyses.
- **Application:** Reference for routine laboratory procedures, quality assurance, regulatory compliance, and environmental research.

2. **Methods of Air Sampling and Analysis, Third Edition**

- **Editor:** James P. Lodge, Jr.
- **Publisher:** American Public Health Association (APHA)
- **Scope:** Authoritative guide detailing methods for the collection, sampling, and analysis of airborne pollutants, including particulate matter, gases, and volatile compounds.
- **Application:** Used for ambient and industrial air quality monitoring, emission testing, and research studies.

Technical Requirements:

- Latest edition of the respective publications must be supplied.
- Hardbound copies with ISBN and official publication details.
- Books must be authentic and procured through authorized distributors or publishers.

2.16.3 Chemicals – Reagents / Analytical Grade

The bidder shall be obligated to supply the Chemicals preferably Merck brand in strict compliance with the analytical methodologies prescribed in the *Standard Methods for the Examination of Water and Wastewater*, 24th Edition, as well as the *Methods of Air Sampling and Analysis*, Third Edition for the aforementioned parameters listed under brief description.

2.16.4 Glassware

Glassware shall be Borosil make (unless otherwise specified, compliant with ASTM E438 Type I standards for chemical durability).

Sl. No.	Item	Material / Standard	Size / Volume	Estimated Quantity Per Van	Notes
1	Bottle top dispenser , with Recirc, 1-10ml, with 1ltr Duran Lab bottle		1000 ml	2	For COD analysis
2	Beakers	Borosilicate Glass (Pyrex / Equivalent)	100 mL, 250 mL,	3 each size	For general sample processing
3	Conical Flasks	Borosilicate Glass	250 mL,	6 each size	Sample preservation and titration
4	Volumetric Flasks	HDPE	100 mL,	3 each size	Standard solution preparation
			500 mL, 1000 mL	1 each size	
5	Graduated Cylinders	Borosilicate Glass / Plastic	25 mL, 50 mL, 100 mL	2 each size	Accurate volume measurement
6	Pipettes	Borosilicate Glass	5mL, 10mL	6 each size	For precise liquid transfer
7	Funnels	Borosilicate Glass / Plastic	50 mm – 100 mm	3 each	Filtration and transfer
8	Reagent Bottles	Amber	250 mL,	3 each	Storage of

		Borosilicate / HDPE	500 mL, 1 L	1 each size	prepared reagents
9	Wash Bottles	HDPE / PP	500 mL	2	For rinsing and dilution
10	Test Tubes	Borosilicate Glass	20 mL	6	Sample reactions, small-volume handling
11	Glass Rods	Borosilicate Glass	150 mm	6	Stirring and mixing
12	BOD Bottle		300 ml	24	
13	Burette	Poly Propylene	10ml	2 each	Sample titration
14	Burette Stand & Clamp	Poly Propylene/Metal / Stainless Steel		2 each	Sample titration
15	Glass dropper	Glass	2ml, 5ml	6 each	
16	Spatula spoon	Stainless Steel	12, 10, 8, 6, Inch	6 each	
17	Pipette bulb	rubber		6	

- All Chemicals and glasswares must be sourced from reputable manufacturers (e.g., Merck, Sigma-Aldrich, Borosil, Tarsons, or equivalents) and bear compliance markings. Bidders shall submit evidence of ISO 9001 certification for quality management and adherence to REACH/CLP regulations for chemical safety.

PART B – OPERATION AND MAINTENANCE OF MOBILE ENVIRONMENTAL MONITORING LABORATORIES

B.1 Scope of Work

The selected agency shall be entrusted with the comprehensive, uninterrupted, and high-standard operation and maintenance of the Mobile Environmental Monitoring Laboratory (MEML) for a continuous period of **12 months** from the date of commissioning under Part A of this tender.

The scope of services shall encompass the following core functions:

1. **Deployment of Competent Personnel**(*to be retained for the full duration of the contract*):

2. **Technical Assistant** – Graduate in Environmental Science/Chemistry/Biotechnology or equivalent; with adequate experience in environmental monitoring; capable of sample collection, in-situ testing, instrument calibration, and environmental data interpretation. Role of responsibility: Operate and maintain **scientific instruments, analyze water, air and noise pollution parameters**, Perform **on-site calibration** of equipment, Maintain **inventory and documentation** of field activities, Ensure **vehicle readiness**, including power systems and connectivity, Coordinate with central teams for **data transmission and reporting**
 - **Cleaner** – Responsible for daily hygienic maintenance of vehicle interiors/exterior, safe handling of laboratory consumables, and proper disposal of waste as per Bio-medical and Hazardous Waste Rules.
 - **Driver** – Holder of valid Heavy Motor Vehicle licence with at least 7 years' experience, including a minimum of 2 years operating specialised or scientific vehicles; conversant with preventive maintenance, logbook upkeep, and safe navigation in urban and rural terrains.
3. **Laboratory Operations** – Complete handling of onboard analytical systems (air, water, noise, and meteorological monitoring), ensuring calibration traceable to NABL/ISO standards and compliance with CPCB technical guidelines.
4. **Preventive & Corrective Maintenance** – Scheduled preventive maintenance, routine servicing, and immediate fault rectification of both vehicle and integrated instruments, ensuring minimum downtime.
5. **Field Monitoring Assignments** – Execution of sampling and testing campaigns at TNPCB-designated sites, often under time-critical and adverse environmental conditions.
6. **Data & Record Management** – Maintenance of validated field data logs, calibration records, equipment usage registers, and submission of authenticated monitoring reports in prescribed formats (digital and physical).
7. **Statutory Compliance** – Adherence to all applicable environmental, occupational health, safety, and labour laws, including but not limited to EPF Act, ESI Act, Minimum

Wages Act, Motor Vehicles Act, Bio-medical Waste Management Rules, and Hazardous and Other Wastes (Management & Transboundary Movement) Rules.

B.2 Contract Period and Continuity of Service

- The contract period shall be 12 months from the date of commencement, without service interruption, except for force majeure conditions duly accepted by TNPCB.
- Any gap in service exceeding 72 hours (cumulative per year) without prior written authorisation will attract liquidated damages.
- Continuity of staff is essential; replacements require TNPCB's prior written approval and must be of equal or higher qualification and experience.

B.3 Operational Norms

1. **Operational Uptime:** The Mobile Environmental Monitoring Laboratories shall maintain an average operational availability of 98% per calendar month. Any deviation will attract pro-rata penalty deductions.
2. **Response Time:**
 - **Routine Assignments** – Deployment to location within 24 hours of instruction.
 - **Emergency Deployments** – Departure from base within 2 hours of intimation.
3. **Calibration & Quality Assurance:**
 - All instruments to be calibrated at intervals not exceeding 6 months.
 - Calibration certificates must be from NABL-accredited laboratories and furnished to TNPCB within 7 days of calibration.
4. **Maintenance Logs:**
 - Digital and manual maintenance logs to be updated daily and made available for inspection at any time.
5. **Insurance Coverage:** Comprehensive vehicle, instrument, and third-party liability insurance must remain valid throughout the contract term.

B.4 Terms & Conditions Specific to O&M

1. **Workforce Compliance:** All deployed personnel shall be under the legal employment of the agency, with payment of statutory dues supported by monthly proof (EPF/ESI challans, pay slips, wage registers).
2. **Uniform, PPE, and Identification:** Agency shall provide season-appropriate uniforms, safety shoes, gloves, masks, hearing protection, and identity cards conforming to TNPCB's specifications.
3. **Vehicle & Equipment Security:** Agency shall be financially liable for any loss or damage arising from negligence or misconduct of its staff.
4. **Monthly Review Meetings:** Mandatory attendance at O&M performance review meetings convened by TNPCB.
5. **Penalty & Termination:**
 - Penalties for non-compliance will be levied at a minimum of Rs.5,000 per day of default.
 - TNPCB reserves the right to terminate the contract with **30 days' notice** for non-performance, breach of contract, or public interest.
6. **Confidentiality:** Data generated through the Mobile Environmental Monitoring Laboratory operations shall remain the exclusive property of TNPCB and shall not be disclosed to any third party without prior written consent.

B.5 Deliverables

- Fully operational and calibrated Mobile Environmental Monitoring Laboratory at all assigned times.
- Monthly O&M performance report including:
 - Uptime percentage
 - List of assignments completed
 - Maintenance undertaken
 - Calibration certificates

- Staff attendance records
- Annual consolidated performance report covering the entire scope of work.

Vehicle Registration & Comprehensive Insurance

1 Registration

- a. The supplier shall be solely responsible for completing the statutory registration of the Mobile Environmental Monitoring Laboratory Van with the competent Regional Transport Authority (RTO) in the name of the Member Secretary Tamil Nadu Pollution Control Board, prior to delivery.
- b. All statutory fees, road tax, and incidental expenses until acceptance shall be borne by the supplier.

2 Fitness Certification

- a. The supplier shall ensure that the Mobile Laboratory Van is provided with a valid Fitness Certificate as mandated under the Motor Vehicles Act, 1988 and Central Motor Vehicle Rules (CMVR), 1989, prior to delivery.
- b. The Fitness Certificate shall certify the roadworthiness, safety, and compliance of the vehicle with prescribed Indian standards.
- c. Any fees, testing charges, or other statutory payments for obtaining the Fitness Certificate shall be the responsibility of the supplier.

3 Insurance of Vehicle and Instruments

- a. The supplier shall obtain, at its own cost, a Comprehensive Insurance Policy from an IRDAI-registered insurer, covering both:
 - a) The Mobile Laboratory Van (vehicle).
 - b) All scientific equipment, instruments, and accessories installed therein.
- b. The policy shall remain valid for a minimum period of twelve (12) months from the date of commissioning.

4 Scope of Insurance Coverage

The comprehensive policy shall mandatorily cover the following risks:

- a. Theft, burglary, and robbery.
- b. Fire, explosion, and accidental damage.
- c. Natural calamities (flood, cyclone, earthquake, storm, lightning, landslide, etc.).
- d. Third-party liability as per the Motor Vehicles Act.
- e. Riot, strike, and malicious damage.

5 Handover of Documents

The supplier shall hand over the original Registration Certificate (RC), valid Fitness Certificate, Comprehensive Insurance Policy, Endorsements, and related statutory documents to the Purchaser/Board at the time of delivery.

6 Liability & Claim Settlement

- a. The supplier shall remain responsible for ensuring the validity of the insurance and fitness certification until final acceptance and shall provide full assistance in settlement of claims, if any, during the insured period.
- b. No vehicle/equipment shall be accepted without valid Registration, Fitness Certificate, and Comprehensive Insurance as stipulated herein.

Additional specifications:

Sr No.	Specification	requirements
1.	Instrument Manual	The offered instrument should be supplied with (A) Operator's instruction/user manual in English language. (B) List of equipment and procedure required for local calibration and routine maintenance
2.	Installation, commissioning	The supplier will have to carry out successful Installation at the laboratory premises (where the system has to be installed).
3.	IQ,OQ and PQ	Onsite Installation (IQ), Operation (OQ) of the instrument and supplier must assist till satisfactory Performance (PQ) of the instrument.

4.	Training	The supplier will have to provide on - site comprehensive training for a min. of 2 scientific personnel operating the system and support services till customer satisfaction.
5.	Past Performance	The bidder must have previously supplied instrument to at least two central/state govt. institutions. Preferentially two state govt. institutions in Tamil Nadu. The SO/PO copies (Max. 5) of the same should be attached with the bid documents.
6.	Service Centre	The Bidder/vendor must have functional service centre in Tamil Nadu. An Undertaking should be attached furnishing the exact address of the service centre with all the necessary information such as contact person names, contact numbers, etc.,
7.	Demonstration	Vendor has to demonstrate the equipments/Vehicle (<i>during or before Price Negotiation</i>) at Chennai, within specified limit, if asked for; failing to which offer will be rejected.
8.	Complaints in warranty	Response time to attend the Complaint during warranty - Max. 48 Hrs. Time duration for repairing /replacing the defect during warranty – within 1 week.
9.	Warranty Clause:	The Conductivity Meter should come with unconditional warranty which includes supply of consumables, spares & comprehensive maintenance contract for a period of 3 year from the date of installation.
10.	OEM and Channel Partner	The OEM and/or one of its authorized channel partner are eligible to participate in the bidding process. In the event that a channel partner intends to submit a bid, it is mandatory for the channel partner to furnish an authorization certificate from the OEM. This certificate must explicitly state that the channel partner is the sole entity authorized by the OEM to participate in the specific bidding process.

Technical Specification Compliance Statement Document Guidelines:

1. The **Complete Technical specification compliance statement document must be signed along with company seal** for its authenticity and acceptance that any incorrect or ambiguous information found submitted will result in disqualification.
2. **Document should be uploaded as one single PDF file comprising of Technical compliance statement as well as all other relevant Documents**
3. **Technical Compliance Statement should be in tabular format (as given below):**
Should mandatorily include the compliance/non-compliance of all the technical, non-technical specifications and bidder qualification criteria in full in separate tables.
4. The specifications are clearly mentioned in the document and the Bidder are requested to submit Bid only if their offer strictly comply with these specifications. Please note that no deviation in the required specification will be permitted. The bidding for the instruments having different specification will be on Bidder's risk as the Board will not entertain such Bids. BIDS CARRYING THE STATEMENT LIKE "SPECIFICATION AS PER TENDER DOCUMENT" SHALL NOT BE ENTERTAINED. THE PRODUCT SPECIFICATIONS SUPPORTED BY TECHNICAL LITERATURE AND LIST OF USERS MUST BE ENCLOSED.
5. Bidder ensures that technical specification shall comply and supported with technical brochure. In case, technical specification does not meet or found in their supported brochure, the bid will be rejected.
6. The installation of the instruments at the respective site is the entire responsibility of the supplier. It must be done either by the principal/supplier or their authorized agents strictly within duration specified in this document on the receipt of the instruments by the Board.
7. If the instrument supplied is found defective/unsatisfactory condition/short supply/other than specifications in the Purchase Order, the same will have to be replaced at the supplier's risk and cost. No freight and other charges for replacement will be paid by the Board.
8. The tenderer shall submit a detailed item-wise compliance / non-compliance statement referring para-wise to the requirements given in this document, for precise evaluation of tender and for any future reference. The compliance statement shall be supported by original brochure(s) of the equipment or sub component from the manufacturer. **In case**

the original brochure is silent on any part of tender specification, it shall be supported by an undertaking by the manufacturer, if claims complied. The technical specifications and other requirements contained in this document are essentially required by the indenter. However, reasons for non-compliance, if any, for certain limited paras, or even sub-paras of the document may also be given by the tenderer. Silence on any part of the commercial or technical specification or failure / omission to provide any such details will be treated as non-compliance. All non-compliance of specifications, even of minor deviations should be clearly brought out.

Technical compliance statement

Sr. No.	Bid Specification	Offered Specification	Compliance (Yes/No)	Remarks

Non-Technical compliance statement

Sr. No.	Bid Specification	Offered Specification	Compliance (Yes/No)	Remarks

Bidder qualification criteria-

Sr. No.	Bid Specification	Offered Specification	Compliance (Yes/No)	Remarks

Place of supply:

Consignee location is as follows:

Tamil Nadu Pollution Control Board
76, Mount Salai, Guindy, Chennai - 600 032.

Added Bid Specific Terms and Conditions

1. Generic

- **OPTION CLAUSE:** The Client reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. The Agency is bound to accept the orders accordingly.
- The specification has been shown in the tender and the material of the same specification will be accepted and also to be supplied.

2. Scope of Supply

- Scope of supply (Bid price to include all cost components): Supply, Installation, Testing, Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any).
- Three sets of invoices showing the purchase order number, date and description of items as per order, quantity, unit against each item and total amount must be provided. One extra copy invoice & delivery challan must be provided to each consignee along with the instrument at the time of delivery.

3. Service & Support

- a) **Availability of Service Centers:** Agency/OEM must have a Functional Service Centre in the State of each Consignee's Location in case of carry-in warranty. (Not applicable in case of goods having on-site warranty). If service center is not already there at the time of bidding, successful bidder / OEM shall have to establish one within 30 days of award of contract. Payment shall be released only after submission of documentary evidence of having Functional Service Centre.
- b) **Operation & Maintenance Training:** O & M training has to be imparted as mentioned in the specification/tender document.

- c) After successful installation of instrument/equipment at each site, the vendor has to submit installation and performance report along with invoice.

4. Warranty

- a) Warranty period of the supplied products shall be as given in specifications from the date of final acceptance of goods or after completion of installation, commissioning & testing of goods (if included in the scope of supply) at consignee location (Respective AEL of Chennai and Salem). OEM Warranty certificates must be submitted by Successful Bidder at the time of delivery of Goods. The seller should guarantee the rectification of goods in case of any break down during the guarantee period. Seller should have well established Installation, Commissioning, Training, Troubleshooting and Maintenance Service group in TAMILNADU for attending the after sales service.
- b) Successful bidder will have to ensure that adequate number of dedicated technical service personals/ engineers is designated/deployed attending to the Service Request in a time bound manner and for ensuring Timely Servicing/rectification of defects during warranty period, as per Service level agreement Indicated in the relevant clause of the bid.

5. Completion of installation and demonstration.

- After the delivery, all the Equipment and its accessories to be commissioned at respective places. For the purpose of correspondence with Tamil Nadu State Pollution Control Board may address to Member Secretary on the address mentioned in the letter head.

SECTION3– BIDDER QUALIFICATION CRITERIA

- a) **Experience:** The Agency should have been in the business of manufacturing, supplying Mobile Laboratories systems and related activities in Tamil Nadu for at least 3 year as on 01.09.2025
- i. The firm should have its own office in Tamil Nadu to regularly serve our purpose.
 - ii. The bidder must be proprietorship firm or partnership firm or private limited company or public limited company. In case of partnership firm it must be registered under Partnership Act. In case of private limited company or public limited company it must be registered under the Indian Companies Act 1956.
 - iii. Proof of Partnership Deed, Incorporation of the Firm / Company (Articles of Association) should be submitted duly attested by the authorized signatory.
 - iv. Statement of legal capacity.
 - v. Should have supplied to any government institute with sufficient documents to verify the same.
 - vi. Specifications have been mentioned in the tender and purchase order. The items, material of the same make & specifications only will be accepted. If the working of the instruments is found unsatisfactory, it is liable to be rejected and the decision of the accepting authority shall be binding on the supplier. If the instruments/parts thereof should be replaced by the principal supplier, the account of shipment/re shipment will be borne by supplier before warranty period/ by purchaser after warranty period. This will also be applicable for the items required if any, under replacement warranty.

b) **The Agency should have been registered entity in India. Necessary registration documents establishing registration in India should be provided. Attested Copy of each of the following should also be furnished.**

I. Permanent Account Number (PAN).

II. GST Registration Number.

III. Income Tax Returns filed for the last three financial years—2022- 2022&2023-24 2024-25.

IV. The Agency should not have been blacklisted by any of the Govt. of Tamil Nadu, Govt. of India, or any State government/ PSUs. An affidavit to this effect should be provided by the agency on appropriate stamp paper.

V. The Agency should be a profit-making agency in each of the last three financial years.

c) If the agency is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Turnover" criteria and "Experience Criteria" subject to meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.

d) **Experience Criteria:** In respect of the filter applied for experience criteria, the Bidder or its OEM (themselves or through reseller(s)) should have regularly, manufactured and supplied same or similar Category Products to any Central/State Govt. Organization/PSU/Public Listed Company for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.

SECTION4 – INSTRUCTIONTOBIDDINGAGENCIES

- a) The Technical Proposal along with EMD shall be submitted through e-tender website only.
- b) Submission letters for both Technical and Financial Proposals should respectively be in the formats specified in this document shall be through e-tender website only.
- c) The proposals shall be signed and submitted by the Authorized Signatory of the Agency. The authorization shall be attached in the Technical Proposal and shall be in the form of a written power of attorney/board resolution or in any other form demonstrating that the representative has been duly authorized to sign.
- d) The selection would be on the Quality Cum Cost Based Selection (QCBS) based on the final weighted score, subject to fulfilling the requirements of the Qualification Criteria. The Proposal will form part of the contract with the selected agency.
- e) The Agencies shall bear all costs associated with the preparation and submission of their proposals. The Member Secretary, TNPCB, is not bound to accept any oral proposals, and reserves the right to annul the selection process at any time prior to award of contract, without any liability to TNPCB.
- f) The Technical and Financial Proposal to be submitted by the Agency should be firm and valid for a period of 30 days from the last date of submission of the proposal.
- g) **Applicants may seek clarifications on the guiding document, if any, before 7 calendar days from the due date of submission of the proposals. Any request for clarification must be sent in writing to TNPCB, email: ddwaterchn@tnpcb.gov.in.**
- h) An addendum, if applicable, will be published on the official website on or before -- 15.10.2025; 5:00 PM.
- i) At any time before the submission of Proposals, the Member Secretary, TNPCB, may amend this document by issuing an addendum, which shall be binding on the agencies.
- j) The agencies shall acknowledge the tender conditions and all subsequent amendments and submit along with their proposals duly signed. Therefore, the tender document signed by the authorized signatory should be the part of the technical proposal.

- k) The Member Secretary, TNPCB, will select the agency that has scored the highest as per the evaluation criteria – combined score of technical proposal and financial quote.
- l) The selected firm may be invited for negotiations, if felt necessary by TNPCB.

SECTION 5-PREPARATION, SUBMISSION AND EVALUATION

5.1. Preparation of Technical Proposal

In addition to the documentary proof of the minimum qualification criteria listed in Section 3, it is suggested that the agency should submit the proposal covering the following invariably.

- a) List of other Clients and the work assignment as per the prescribed format should be provided.
- b) List of available infrastructures at the local office in Chennai and/or at consignee locations for undertaking the Activities mentioned in the scope of work.
- c) Single point of contact: Please indicate the senior management personnel, who would be in regular touch with the TNPCB for assignment.

5.2. Preparation of Financial Proposal

- a) In preparing the financial proposal, the Agencies are expected to consider the various requirement and conditions stipulated in this RFP document.
- b) The Financial Bid shall contain the lump sum financial quote covering the total fees / cost for the entire project excluding GST / any other tax if applicable. The Financial Bid shall be for an overall amount for the entire project duration.
- c) The amount quoted should include all costs such as professional fees, installation fees, travel expenses, lodging, boarding, administrative charges, and all taxes/duties etc. The Member Secretary, TNPCB, will not reimburse any other expenses other than what is quoted in the Financial Bid.
- d) The Financial Bid shall be only in Indian Rupees.
- e) The total amount indicated in the financial proposal shall be without any condition attached or subject to any assumption and shall be final and binding. In case any assumption or condition is indicated in the Financial Bid, it shall be

considered non- responsive and liable to be rejected.

The proposal should be submitted as per the e-tender formats available in the website

5.2.1. The Submission and Opening of Proposals

5.2.1.1 The Bidders are required to register themselves on the Tamil Nadu e-procurement system portal at URL:<https://tntenders.gov.in/> and submit soft copies of their proposal electronically using valid Digital Signature Certificates. Bidders may refer to instructions on online proposal submission available on the site at: <https://tntenders.gov.in/>

5.2.1.2 The Proposal must be submitted online through the e-Procurement process as specified in the RFP. The Authority shall not be held liable for any delay in bid submission for any reason whatsoever.

5.2.1.3 The Proposals addressed to the Authority as mentioned in the Data Sheet shall be submitted in two parts following the formats/schedules given for respective proposal.

5.2.1.4 The first part - Technical Proposal should contain the scanned copy of the following documents:

Technical Proposal

- a. Form TECH A – Minimum Eligibility Experience
- b. Form TECH 1 – Technical Proposal Submission Form (Annexure I)
- c. Form TECH 2 – Particulars of the Bidder
- d. Form TECH 4 – Summary of Bidder's Experience
- e. Form TECH 5 – Bidder's Experience

5.2.1.5 The Proposals must be properly signed by the authorized representative (the "Authorized Representative") as detailed below:

- a. By a partner, in case of a partnership firm and/or a limited liability partnership; or

- b. By a duly authorized person holding the Power of Attorney, in case of a Limited Company/Private Limited Company or a Corporation; or
- c. By a person authorized through a General or Specific Board Resolution for signing proposals; Certified True Copy of such resolution in the hands of a Director of the Company shall be submitted for this purpose.
- d. The power of attorney, if applicable should be certified under the hands of a partner or director of the Bidder and notarized by a notary public in the standard form and shall accompany the Proposal.

5.2.2 The Second Part - Financial Proposal should contain the contents as below:

Financial Proposal

a. FORM FIN-1: Financial Proposal Submission Form ***(To be submitted in BOQ format only)***

5.2.2.1 A Price Bid format has been provided with the RFP document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. Bidders are required to download the Price Bid file (BOQ), open it and complete the cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the Price Bid file is found to be modified by the bidder, the bid will be rejected.

5.2.2.2 While submitting the Financial Proposal, the Bidder shall ensure the following:

- a. All the costs associated with the assignment shall be included in the Financial Proposal.
- b. The Financial Proposal shall take into account all expenses and tax liabilities except GST which shall be paid at applicable rates. For the avoidance of doubt, it is clarified that all taxes except GST shall be deemed to be included in the costs shown in the Financial Proposal. Further, all payments shall be subject to deduction of taxes at source as per Applicable Laws.
- c. Costs shall be expressed in INR.

The Bidders are advised in their own interest to ensure that completed Proposals are submitted well before the dates and time stipulated in the document. The Authority shall not be responsible for any delay in submission of the proposal due to any reason whatsoever.

5.2.3 Prior to evaluation of Proposals, the Authority will determine whether each Proposal is responsive to the requirements of the RFP. The Authority may, in its sole discretion, reject any Proposal that is not responsive hereunder. A Proposal shall be considered responsive only if:

- a. The Technical Proposal is received in the forms specified at Section 6;
- b. It contains all the information (complete in all respects) as requested in the RFP;
- c. It does not contain any condition or qualification.
- d. The Technical proposal does not contain any information regarding Financial Quote/Proposal

5.2.4. The proposals will be opened online by the Authorized Representative of the Authority as per schedule.

5.2.5. Clarifications: Bidders requiring any clarification on the RFP and its terms and conditions may send their queries to the email id mentioned in the data sheet so as to reach before the date mentioned in the Schedule of Selection Process.

5.3. Payment Schedule:

- a) The payment would be made within 30 working days after installation /submission of the bills. A brief report of the work carried out during the billing period should be submitted along with the bills.
- b) Bill of this supply will be issued in the name of The Member Secretary, Tamil Nadu State Pollution Control Board, Chennai, and Tamil Nadu.
- c) Payment terms: 70% payment shall be paid against delivery, installation and satisfactory performance including fabrication of all items and balance 30% payment will be made **within 90 days (NINETY) days after successful installation and acceptance of ordered goods by a duly constituted Technical Committee at TAMILNADU POLLUTION CONTROL BOARD.** The payment will be released from TNPCB, Corporate office, Chennai on supplying the material in full and satisfactory condition along with satisfactory report (to be issued by the concerned In-charge) and on submission of the pre-receipt bill/invoice in duplicate along with the delivery challans are to be furnished to the concerned labs..

5.4. Opening of Bids:

The Technical Proposal shall be opened at the prescribed date and time and shall be evaluated for satisfactory compliance of qualifications and conditions.

5.5. Financial proposal Opening:

Financial proposal would preferably be opened on the same day after the evaluation for satisfactory compliance of qualifications and conditions. However, the final date of opening of the financial proposal shall be decided by TNPCB. The proposals would be opened on given date and time, even if the representatives were not present.

5.6. Evaluation of Score for Agencies:

The Member Secretary, TNPCB, will correct any arithmetical errors in Financial Proposals. While correcting arithmetical errors, in case of discrepancy between the amounts mentioned in words and figures, the amount quoted in words shall only be considered.

The Financial Score would be calculated as follows:

$$\text{Score calculation} = \frac{\text{Lowest Price quoted by authorized manufacturer}}{\text{Price quoted by bidder being evaluated}} \times 100$$

The evaluation of proposals shall be on the principle of financial score. The Assignment shall be awarded to the bidder scoring the lowest financial score as decided by selection committee.

5.7. Other Terms & Conditions:

a) Right to accept/reject any application(s).

The Member Secretary, TNPCB, reserves the right to accept or reject any or all Applications and to annul the qualification process at any time without any liability or any obligation for such acceptance, rejection, or annulment, without assigning any reasons.

b) Amendment of RFP document.

At any time, prior to the deadline for submission of Applications, TNPCB either on its own or on request of the Applicant may amend the RFP documents by issuing addendum or addenda including those issued after the pre-bid conference. These addenda shall be posted at the website of the Member Secretary, TNPCB (www.tnpcb.gov.in)/e-tender website (<https://tntenders.gov.in>) and shall be

treated as a part of the RFP Documents.

- c) The Member Secretary, TNPCB, may, at its discretion, extend the deadline for the submission of Applications.

5.8. Disqualification:

The following events and circumstances may result in disqualification of the applicant from the bidding process:

- a) Submission of Proposal after the Proposal Due Date
- b) If the Proposal contains misleading or false representation in the forms, statements and attachments submitted in proof of the eligibility requirements.
- c) If the Proposal contains conditions other than the conditions mentioned in this document or any additional condition put in by the agency to the TNPCB.
- d) If the Proposal submitted is not accompanied by the required documentation will be considered nonresponsive
- e) Agency is unable/fails to provide clarifications related to its Proposal..
- f) Agencies who attempt to influence the qualification or selection process shall be disqualified from the process at any stage.
- g) The Member Secretary, TNPCB, reserves the right to reject or disqualify the proposal, if any detrimental information becomes known after the Agency has been qualified.
- h) The Member Secretary, TNPCB, reserves the right to reject or disqualify the proposal, if any detrimental information becomes known after the Agency has been qualified.
- i) In case of such disqualification under any circumstances, the decision taken by the Member Secretary, TNPCB shall be considered as final and binding.

5.9. Format and Signing of Proposal:

- a) The proposal should be short, concise & include all points indicated in the Document.

- b) The Proposal shall be typed or written in indelible ink and should be in English, Proposal in other language would not be accepted. The pages and volumes of each part of the Proposal shall be clearly numbered. The Proposal shall contain all the information required herein and references of previous submissions shall not be considered.

5.10. Confidentiality:

- a) Information relating to the examination, clarification, and evaluation for the Agency shall not be disclosed to any person not officially concerned with the process. The Government of Tamil Nadu representatives including its officials, directors, employees, and advisors will treat all information submitted as part of Proposal in confidence and would require all those who have access to such material to treat the same in confidence.
- b) The TNPCB representatives including its officials, directors, employees, and advisors would not divulge any other information related to financials, background etc. Unless, it is ordered to do so by any authority pursuant to applicable law or order of a competent court or tribunal, which requires its disclosure.

5.11. Conflict of Interest:

The Agency shall not receive any remuneration in connection with the assignment except as provided in the contract. The Agency and its affiliates shall not engage in consulting activities that conflict with the interest of the client.

5.12. Earnest Money Deposit:

- a) An Earnest Money Deposit (EMD) for the sum of Rupees Three Lakhs Only (Rs.3,00,000/-) will be required (should be paid electronically through e-tender portal).
- b) Bids received without the specified Earnest Money Deposit shall be summarily rejected.
- c) Earnest Money Deposits of unsuccessful applicants shall be returned, without any interest, within one month after signing the contract with successful applicant or when the selection process is cancelled by the Client.

5.13. Withdrawal of Proposals:

No modification or substitution of the submitted

Proposal shall be allowed. Agency may withdraw its Proposal after submission, provided that the written notice of the withdrawal is received by the Member Secretary, TNPCB, before the due date of submission of Proposals. The withdrawal notice shall be prepared in original only and each page of the notice shall be signed and stamped by the Authorized Signatories.

The copy of the notice shall be duly marked "WITHDRAWAL". "No withdrawal will be permitted if the withdrawal request was received by the Member Secretary, TNPCB, after the last date of submission of proposal.

5.14. Negotiations:

- a) Negotiations will be held with the highest scorer to further reduce price and improve other parameters. The final negotiated consultancy fee shall be called the "Agreement Value".
- b) Negotiations will include a discussion on the Technical Proposal, the proposed methodology (work plan), staffing and any suggestions made by the Agency to improve the Terms of Reference.

TNPCB and selected Agency will then work out agreed final Terms of Reference, staffing and bar charts indicating activities, key and other support staff, time duration on the field and at the home office, staff-months, logistics, and reporting. The agreed work plan and final Terms of Reference will then be incorporated in the "Description of Services" and form part of the Contract.

5.15. Award of Contract:

Once the negotiation is finalized with the highest scorer, the successful bidder will be informed of the acceptance of the proposal and he will convey his acceptance within 7 days and will be expected to enter a written contract incorporating all the terms of the RFP within 10 days of such intimation.

5.16. Security Deposit:

- a) The Successfully Agency shall, before entering contract, furnish a performance e-guarantee for the delivery of the material (on supplying the material in full and satisfactory condition along with satisfactory report) in the form of a bank guarantee for an amount equivalent to 5% of the Agreement Value excluding GST in the form of DD or Banker's Cheque drawn on any Indian Nationalized/ Scheduled Commercial Bank in favor of "Tamil Nadu Pollution Control Board" payable at Chennai or an irrevocable bank guarantee with a validity period till the expiry of agreement in favor of TNPCB within 5 days from the date of receipt of letter of acceptance. The Bank Guarantee shall be valid till the expiry of agreement.
- b) It is also informed to submit stamp paper of Rs. 20.00/- to enter into agreement with Board. The performance Bank Guarantee/ Performance Security amount will be refunded on completion of the warranty period of two years, without any Interest. The defective, substandard and contrary to the specification of instruments supplied have to be replaced by the supplier at their cost and responsibility.

5.17. Corruptor Fraudulent Practices:

The Member Secretary, TNPCB, requires that Applicants under this RFP observe the highest standard of ethics. In pursuance of this policy, no bidder shall engage in any corrupt practice or fraudulent practice.

- a) "Corrupt practice" means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public servant; and
- b) "Fraudulent Practice" means a misrepresentation of facts in order to influence the decision to award the consultancy contract to the detriment of the Member Secretary, TNPCB, and targeted stakeholders and includes collusive practice among Applicants (prior to or after the bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Member Secretary, TNPCB, and targeted stakeholders of the benefits of free and open competition.

The Member Secretary, TNPCB, will reject a bid for award of consultancy work if it is determined that the Applicant recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

5.18. Forfeiture of EMD:

The Member Secretary, TNPCB, will declare an Applicant ineligible, either indefinitely or for a stated period, to be awarded a contract / contracts, if it at any time determines that the Applicant has engaged in corrupt or fraudulent practices in competing for, or in executing the consultancy contract

- a) Failure by the Selected Agency to accept the order issued by the Client with respect to award of the Contract, within seven days stipulated time from the date of receipt of the order makes the EMD liable for forfeiture at the discretion of TNPCB. However, the Member Secretary, TNPCB, reserves its right to consider at its sole discretion the late acceptance of the order by Selected Agency.
- b) Failure to execute the Contract within 7 days stipulated time of acceptance of the order by the Selected Agency makes the EMD liable for forfeiture at the discretion of TNPCB. In such a case, the Member Secretary, TNPCB, at its discretion may cancel the order placed on the Selected Agency without giving any notice.
- c) Failure to submit the performance guarantee within stipulated period from the date of execution makes the EMD liable for forfeiture. In such instance, the Member Secretary, TNPCB, at its discretion may cancel the order placed on the Selected Agency without giving any notice.

5.19. Breach of Contract:

Save as provided hereunder any activity in violation of this Contract to be executed shall be termed as breach of Contract

5.20. Force Majeure:

The failure of a Party to fulfill any of its obligations shall not be a breach of or default in so far as such inability arises from an event of Force Majeure, provided that the Party affected by such an event has taken all reasonable precautions, due care and reasonable alternative measures, all with the objective of carrying out the terms and conditions of the Contract. In the event of Force Majeure event, the parties shall take the following measures:

- a) A Party affected by an event of Force Majeure shall take all reasonable measures to remove such Party's inability to fulfill its obligations here under with a minimum of delay.
 - b) A Party affected by an event of Force Majeure shall notify the other Party of such event as soon as possible and in any event not later than fourteen (14) days following the occurrence of such event, providing evidence of the nature and cause of such event, and shall similarly give notice of the restoration of normal conditions as soon as possible.
 - c) The Parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
 - d) For the purpose of this RFP, "Force Majeure" means an event which is beyond the reasonable control of a Party, and which makes a Party's performance of its obligations hereunder impossible or so impractical as reasonably to be considered impossible in the circumstances by acts of God and includes, but is not limited to, war, riots, civil disorder, earthquake, fire, explosion, storm, flood or other adverse weather conditions, strikes, lockouts or other industrial action (except where such strikes, lockouts or other industrial action are within the power of the Party invoking Force Majeure to prevent), confiscation or any other action by government agencies. Force Majeure shall not include
 - (i) any event which is caused by the negligence or intentional action of a Party or agents' employees thereof, not
 - (ii) any event which a diligent Party could reasonably have been expected to both
- (A) Take into account at the time of the conclusion of this Agreement and

(B) Avoid or overcome in the carrying out of its obligations hereunder.

Force Majeure shall not include insufficiency of funds or failure to make any payment required hereunder.

5.21. Termination for Default:

The Member Secretary, TNPCB, may terminate the Contract if:

- a) The Agency fails to remedy any breach hereof for any failure in the performance of its obligations hereunder, within fifteen (15) days of receipt of notice of default or within such further period as the Member Secretary, TNPCB, may have subsequently granted in writing.
- b) The Agency becomes insolvent or bankrupt
- c) The Agency fails to comply with decisions / mandate of the TNPCB.
- d) Any document, information, data or statements submitted by the Agency in its Proposals, based on which the Agency was considered eligible or successful, is found to be false, incorrect or misleading; or
- e) The acts of Agency are found to have indulged in unethical practices, by TNPCB.
- f) The Agency may also terminate the Contract for Default if the Member Secretary, TNPCB, is in material breach of its obligations pursuant to the Agreement and has not remedied the same within fifteen (15) days (or such longer period as the Knowledge Partner may have subsequently agreed in writing) following the receipt by the Member Secretary, TNPCB, of the Agency's notice specifying such breach.
- g) In the event of termination for default, the party at default shall be liable to pay damages to the party not at fault. In addition, the Member Secretary, TNPCB, shall forfeit the Performance Security if the fault lies with the Agency.

5.22. TerminationwithoutDefault:

The Member Secretary, TNPCB, shall be at liberty to terminate the Contract without assigning any reason by giving 7 days written notice to the other party.

5.23. Penaltyfordelay:

If progress of the assignment or the quality of output is not as per the agreed scope of work, the Selected Agency shall be liable to pay penalty to TNPCB. For delay and poor quality, a penalty up to 10% of payment due will be deducted from the next due payment. This provision will be without prejudice to the right of the Member Secretary, TNPCB, to exercise its right to terminate the contract and claim damages.

5.24. DisputesResolution:

In the event of any legal disputes between parties, the appropriate civil court in Chennai will have sole and exclusive jurisdiction to settle the disputes.

5.25. Confidentiality:

- a) The RFP document contains confidential information proprietary to TNPCB. The Member Secretary, TNPCB, is bound by an agreement of confidentiality and secrecy with regard to the dealings of all stakeholders. The selected Agency may have access to some confidential information for the purpose of the project implementation.
- b) The Agency shall take all precautions necessary to keep the information totally confidential and under no circumstances it will be disclosed to any third party or competitors. The Agency shall render himself liable for disqualification / premature termination of contract apart from other legal action as may be warranted for any laxity on his part. The Member Secretary, TNPCB, is entitled to be indemnified by the Selected Agency for any loss/damage to reputation and/or for any breach of confidentiality.
- c) The information referred to shall include but not restricted to any and every information concerning the Member Secretary, TNPCB, and its stakeholders which the Agency comes to know only on account of his being associated with the Member Secretary,

TNPCB, through the contract which the Selected Agency otherwise would not have had access to.

- d) The Selected Agency shall also not make any news release, public announcements or any other reference on RFP or contract without obtaining prior written consent from TNPCB. Any reproduction of this RFP by Xerox / Photostat/ Electronic or any other means is strictly prohibited without prior consent of TNPCB.

5.26. Liability of the Agency:

The Agency's liability under the Contract shall be as provided by the Applicable Law. However, the aggregate liability of the Agency under this RFP and Contract, or otherwise in connection with the services to be performed hereunder, shall in no event exceed the total fees payable to the Agency hereunder. The preceding limitation shall not apply to liability arising as a result of the Agency's fraud or willful misconduct in performance of the services hereunder.

5.27 Fall Clause

The BIDDER undertakes that it has not supplied/is not supplying similar product/systems or subsystems at a price lower than that offered in the present bid in respect of any other Ministry/Department of the Government of India or PSU and if it is found at any stage that similar product/systems or sub systems was supplied by the BIDDER to any other Ministry/Department of the Government of India or a PSU at a lower price, then that very price, with due allowance for elapsed time, will be applicable to the present case and the difference in the cost would be refunded by the BIDDER to the BUYER, if the contract has already been concluded.

Section 6: TECHNICAL BID (ANNEXURE – I)

TECHNICAL BID (Technical Bid should be uploaded as scanned copy super-scribing “Technical Bid for Selection of authorized manufacturer the Mobile Environmental Laboratories for the strengthening of laboratories of Tamil Nadu Pollution Control Board”).

1	Name of the Work	Request for Proposal (RFP) for Procurement and Commissioning of Two Mobile Environmental Monitoring Laboratories for the Tamil Nadu Pollution Control Board.		
2	Name and Address of Tender/ Agency			
3	Company Profile	Annexure		
4	Annual Turn Over (Attach Audited Balance Sheet for each year)	(i) 2022-23 (ii) 2023-24 (iii) 2024-25		
5	Experience of similar work (Attach work order & certificate of successful completion or proof of final payment)	Year	No. of Works	Total Amt. (In Lakh)
6	EMD Cost (Rs.3,00,000 only)	Only by online mode in e-tenders website		
7	Registered Address			
8	Phone No. With STD Code			
9	Fax No.			
10	Mobile No.			
11	Email ID			

12	Address for all communications during the execution of work		
13	List of Enclosures	(i) (ii) (iii) (iv)	(v) (vi) (vii)
I / We declare that I / We have examined the terms and conditions mentioned in the Tender and accordingly agree and accept the same for tender / bid filing. Seal of the Firm / Company Signature of the Authorized Representative of Bidder / Tender Date:			
The above tender cum bid format should be typed on the official letter head of the bidder. Separate sheet is to be enclosed if the space provided is not sufficient for the data to be provided.			