

Maharashtra Pollution Control Board महाराष्ट्र प्रदूषण नियंत्रण मंडळ

Request for Proposal For

"Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract"

RFP Reference No: MPCB/JD(APC)/VOC/2023-24

Date of Issue:

RFP Price: INR 23,600/-

Issued By:

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DISCLAIMER

This Request for Proposal (RFP) for "Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract" (hereinafter referred to as "Project"), is issued by Maharashtra Pollution Control Board, GoM (herein referred to as 'MPCB').

Whilst the information in this RFP has been prepared in good faith, it is not and does not purport to be comprehensive or to have been independently verified. Neither MPCB, nor any of its officers or employees, nor any of their advisors nor consultants accept any liability or responsibility for the accuracy, reasonableness or completeness of the information contained in the RFP, or for any errors, omissions or misstatements, negligent or otherwise, relating to the proposed RFP for "Project", or makes any representation or warranty, express or implied, with respect to the information contained in this RFP or on which this RFP is based or with respect to any written or oral information made or to be made available to any of the recipients or their professional advisors and, so far as permitted by law and except in the case of fraudulent misrepresentation by the party concerned, and liability therefore is hereby expressly disclaimed.

The information contained in this RFP is selective and is subject to updating, expansion, revision and amendment at the sole discretion of MPCB. It does not, and does not purport to, contain all the information that a recipient may require for the purposes for deciding to participate in this process. Each Party must conduct its own analysis of the information contained in this RFP, to correct any inaccuracies therein and is advised to carry out its own investigation into the proposed MPCB Project, the regulatory regime which applies thereto and by and all matters pertinent to the MPCB Project and to seek its own professional advice on the legal, financial and regulatory consequences of entering into any agreement or arrangement relating to the MPCB Project. MPCB shall not be responsible for any direct or indirect loss or damage arising out of or for use of any content of the RFP in any manner whatsoever.

MPCB shall be the sole and final authority with respect to qualifying a bidder through this RFP. The decision of MPCB in selecting the Service Provider who qualifies through this RFP shall be final and MPCB reserves the right to reject any or all the bids without assigning any reason thereof. MPCB further reserves the right to negotiate with the selected agency to enhance the value through this project and to create a more amicable environment for the smooth execution of the project.

MPCB may terminate the RFP process at any time without assigning any reason and upon such termination MPCB shall not be responsible for any direct or indirect loss or damage arising out of such a termination.

Section I Instruction to Bidders

ABBREVIATIONS

| Abbreviation | Description |
|--------------|--|
| CCA | Controller of Certifying Authorities |
| EnvCC | Department of Environment and Climate Change |
| DSC | Digital Signature Certificate |
| EMD | Earnest Money Deposit |
| GCC | General Contract Conditions |
| GST | Goods and Services Tax |
| GOM | Government of Maharashtra |
| MPCB | Maharashtra Pollution Control Board |
| NDA | Non-Disclosure Agreement |
| PDF | Portable Document Format |
| PKI | Public Key Infrastructure |
| RFP | Request for Proposal |
| PBG | Performance Bank Guarantee |
| SLA | Service Level Agreement |
| SSP | Selected Service Provider |
| TCV | Total Contract Value |
| TCS | Tax Collected at Source |
| TDS | Tax Deducted at Source |
| TEC | Tender Evaluation Committee |

DEFINITIONS

| Term | Definition |
|------------------------------|--|
| Authority/Purchaser | Means Maharashtra Pollution Control Board, Government of Maharashtra i.e. |
| Authority/Furchaser | the issuer of this tender |
| Bidder(s) | Eligible, reputed, qualified entities with strong technical and financial |
| | capabilities for scope defined in this RFP |
| Bid/ Proposal | This means the documents in their entirety comprising of the Eligibility |
| | Proposal, and Commercial Proposal, clarifications to these, technical |
| | presentation/ demo submitted by the Bidder, the Bidder herein, in response |
| | to the RFP, and accepted by MPCB |
| Bidder's Representative | The person or the persons appointed by the Bidder from time to time to act |
| | on its behalf for overall co-ordination, supervision and execution of Project |
| Business Day | This means any day that is not a Sunday or a public holiday (as declared by |
| Dusiness Day | Government of Maharashtra). |
| Contract / Project Period | Time period for completion of the entire project scope of work defined in the |
| | RFP |
| Certificate of Operation | Written documentation issued by MPCB evidencing acceptance, approval or |
| (CoOP) | completion, as the case may be, of any Deliverable including any |
| , , | documentation of Project such that may be required in terms of the Contract |
| Day | A period of 24 hours running from midnight to midnight. It means "calendar |
| | day" unless otherwise stated. Where, because of a difference in time zone, |
| | the calendar day in one country differs from another country then the calendar |
| D !! | day shall be deemed to be the calendar day applicable to India. |
| Deliverables | Equipment, services and other documentation, milestones and activities |
| EMD/ Did Coourity | related to complete the Scope of Work for Project, as defined in the RFP. |
| EMD/ Bid Security | This refers to the amount to be deposited by the Bidders to MPCB to |
| End of Contract | demonstrate commitment and intention to complete bid process of this RFP This refers to the time when the Contract Period shall end |
| RFP Portal | The web portal https://mahatenders.gov.in/ that is official portal for all details |
| INFFORM | and submissions related to this RFP process |
| Letter of Intent / Letter of | This refers to the letter issued by MPCB to the Successful Bidder indicating |
| Award | its selection as the Bidder for implementation of the Project |
| Project | Selection of Service Provider for Request for Proposal (RFP) for Selection of |
| | Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC |
| | Monitoring Stations at Six (06) Locations, and provide various related services |
| | including comprehensive O & M Contract |
| RFP/ Tender | Refers to Request for Proposal containing the technical, functional, |
| | commercial and operational specification and including all |
| | clarifications/addendums, explanations and amendments issued by MPCB in |
| | respect thereof |
| Successful Bidder | Refers to the bidder who has gone through the selection criteria as mentioned |
| | in the RFP and has been selected by the department for the mentioned work |

| Term | Definition | | |
|---|---|--|--|
| Total Contract Value/ Contract Value | Value (Exclusive of all taxes, levies and duties) finally agreed between MPCB and the Bidder for the delivery of Equipment and Services mentioned in the RFP; which will be the maximum value payable to the Bidder for this Project. | | |

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1. Tender Notice

Maharashtra Pollution Control Board (MPCB), Government of Maharashtra (GoM) invites sealed tenders from reputed experienced professional organizations for "Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract". The prospective firms may download the technical and commercial bid from the e-tendering portal https://mahatenders.gov.in and submission of bid may be done as per details provided in RFP.

For complete details & formats of e-tender, the bidders can visit https://mahatenders.gov.in Tender Fee payment of INR 23600/- (INR 20,000 + 18% GST) (Non-Refundable) by payment gateway online. No brokers/intermediaries shall be entertained. MPCB reserves the right to reject any/all applications without assigning any reasons whatsoever.

Note:

- 1) The detailed timetable for the various activities to be performed in e-tendering process by the renderer for quoting their offer is given in this tender document under "TENDER SCHEDULE". Bidder should carefully note down the cut-off dates for carrying out each etendering process/activity.
- 2) Every effort is being made to keep the website up to date and running smoothly 24 x 7 by the service provider. However, MPCB takes no responsibility, and will not be liable for the website being temporarily unavailable due to any technical issue at any point of time. Therefore, bidders are encouraged to submit their proposals and complete the process at least 3 days prior to the deadline. The tenders must follow the timetable of e-tendering process and get their activities of e-tendering process done well in advance to avoid any inconvenience due to unforeseen technical problems, if any.
- 3) In any event MPCB will not be liable and responsible for any damages or expenses arising from any difficulty, error, imperfection or inaccuracy with this website, including all associate service, or due to such unavailability of the website or any part thereof or any contents or any associate services.
- **4)** MPCB will not be responsible for any incomplete activity of e-tendering process of the renderer due to technical error / failure of website and it cannot be challenged by way of appeal, arbitration and in the any court of law.

2. Invitation for Bids

- 1) MPCB hereby invites Proposals from reputed, competent and professional companies, who meet the minimum eligibility criteria as specified in this RFP document for the "Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract" as detailed in this RFP document.
- 2) The complete bidding document shall be published on https://mahatenders.gov.in for the purpose of downloading. The downloaded bidding document shall be considered valid for participation in the electronic bidding process (e-Procurement/ e-Tendering) subject to the submission of required tender/ bidding document fee through e-Tendering Online Payment Gateway mode only.
- 3) To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Class II) as per Information Technology Act-2000 using which they can digitally sign and encrypt their electronic bids. Bidders can procure the same from any Controller of Certifying Authorities (CCA) approved certifying agency. Bidders, who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC.
- **4)** Bidders are also advised to refer "Bidders Manual Kit" available in this document or at https://mahatenders.gov.in for further details about the e-tendering process.
- 5) Bidder is advised to study this RFP document carefully before submitting their proposals in response to the RFP Notice. Submission of a proposal in response to this notice shall be deemed to have been done after careful study and examination of this document with full understanding of its terms, conditions and implications.

Note-

- 1) Earnest Money Deposit: can be paid ONLY through Online Payment mode
- 2) All eligible/ interested Bidders are required to be enrolled on portal https://mahatenders.gov.in before downloading tender documents and participate in e-tender process for this Tender. Bidders are requested to contact the telephone numbers provided on maha-tenders portal in case of any doubts/ information/difficulty regarding online enrolment or e-tendering process.
- 3) Bidders should submit the document related to tender online. Tender Fee of INR 20,000/- (+ 18% GST) should be credited in to MPCB fund account by online payment gateway, before submission of tender response otherwise Bidders cannot participate in tender process. Other instructions can be seen in the tender form. All or any one of the tenders may be rejected by competent authority.
- The Electronic tendering system for MPCB will be available on the URL https://mahatenders.gov.in.

2.1 The summary of details regarding this invitation of bids is listed in the table below:-

| Sr. | Items | Description | | |
|-----|--|---|--|--|
| 1 | RFP Reference Number | MPCB/ | | |
| 2 | Name of the Project | Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract | | |
| 3 | RFP Document Download Start / End Date & Time | Start: [DS1]16/03/2024 @ 11:00 Hrs End: 30/03/2024 @ 17:00 Hrs | | |
| 4 | Last date to send in requests for clarifications | All queries should be received on or before 21/[DS2]03/2024 @ 17:00 Hrs, through email with subject line as follows: "Queries –Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract". The Pre-Bid queries to be sent to the Email Id: idair@mpcb.gov.in | | |
| 5 | Date and Time pre bid Meeting | [DS3]22/03/2024 @ 11:00 Hrs at MPCB HQ | | |
| 6 | Last date for submission of bids | 30/03/2024 @ 15:00 Hrs[DS4] | | |
| 7 | Tender Fee to be paid via Online Payment Gateway mode only. | INR 23,600/- (INR Twenty Three Thousand Six Hundred Only) (+ 18% GST) | | |
| 8 | Date Time and Place of opening of Technical Proposals | 02/04/2024 @ 11:00 Hrs at MPCB HQ, Sion | | |
| 9 | Earnest Money Deposit (EMD) to be paid in form of Online Payment | INR 30,00,000/- (INR[DS5] Thirty Lakh Only) | | |
| 10 | Performance Bank Guarantee (PBG) from Nationalized Bank | 10% of contract value valid up to 3 months post end of contract. PBG Should be only from Nationalized banks. | | |
| 11 | Bid Validity Period | 180 days from the last date (deadline) for submission of bids. | | |
| 13 | Contact Details Dr. V. M. Motghare, JD (APC); Maharashtra Pollution Control Board, 3rd Floor, Kalpataru Point, Opp. PVR Cinema Sion Circle, Sion, Mumbai-400 022 Tel: Email ID: jdair@mpcb.gov.in | | | |

Note: Prospective Bidders may visit MPCB Office for any further information / clarification regarding this RFP on prior appointment during working hours till the date of technical bid submission

3. Tender Schedule

Please Note: All bid related activities (Process) like Tender Document Download, Bid Preparation, and Bid Submission will be governed by the time schedule given under Key Dates below:

| Sr. | A ativity | To be | Start | | Expiry | |
|-----|-----------------------|--------------|--------------|-----------|------------|-------|
| No. | Activity | performed by | Date | Time | Date | Time |
| | | | | | | |
| 1 | Release of E-Tender | Department | 16/03/2024 | 11:00 | 30/03/2024 | 11:30 |
| 2 | E-Tender Download | Bidder | 16/03/2024 | 11:00 | 30/03/2024 | 17:00 |
| 3 | Queries from Bidders | Bidders | 16/03/2024 | 11:00 | 21/03/2024 | 11.00 |
| 4 | Pre-bid Meeting | Department | 22/03/2024 | 11:00 | 22/03/2024 | 11:30 |
| 5 | Bid Submission | Bidders | 16/03/2024 | 11:00 | 30/03/2024 | 17:00 |
| 6 | Technical Bid Opening | | 02/04/2024 @ | 2 11:00 | | |
| 0 | (Envelope - 1) | Department | | | | |
| 7 | Price Bid Opening | | To be annou | nce later | | |
| | (Envelope - 2) | Department | | | | |

Presentations from each of the Bidder will be scheduled at MPCB HQ, Sion. The detailed schedule and agenda for the same will be intimated in due course.

Dates mentioned here, are scheduled dates for Bid Opening Activities. Any changes in dates of opening of technical and commercial bids shall be notified in 'Press Notice/Corrigendum' section on the e-Tendering sub portal of the department before opening of the same.

4. Instructions to Bidders

4.1 Introduction of MPCB

Maharashtra Pollution Control Board (MPCB) is implementing various environmental legislations in the state of Maharashtra, mainly including Water (Prevention and Control of Pollution) Act, 1974, Air (Prevention and Control of Pollution) Act, 1981 and some of the provisions under Environmental (Protection) Act, 1986 and the rules framed there under like, Biomedical Waste (M&H) Rules, 1998, Hazardous Waste (M&H) Rules, 2000, Municipal Solid Waste Rules, 2000 etc. MPCB is functioning under the administrative control of Environment Department, Government of Maharashtra. The Board, therefore has to interact with industries and other institutions for granting consent to carry out operations under the current norms.

4.2 Background

Volatile Organic Compounds (VOCs) are organic (carbon-based) chemicals which evaporate into the air at low temperatures. They are originating from both anthropogenic and natural sources and Biogenic. The Volatile Organic Compounds (VOCs) not only mix with air but also react with

chemicals in the air and create dangerous gases. These invisible chemicals spread poison into the air. Such gases are dangerous not only to humans but also to the environment as these also play important role in the formation of Ozone and climate change.

The main reason for increasing VOC in urban areas is the burning of fossil fuel, refuge waste and leaves. At the same time, in all suburban areas, it is contributed by burning coal, wood and dung cake but traffic jams and heavy vehicular traffic & industries nearby urban and rural area add additional burden.

Whilst VOCs are harmful to the environment, it is the risks they pose to the health of people at large is of more concern. The low-level effects of VOCs include throat, nose and eye irritation, nausea, headaches, dizziness, and vomiting, as well as more severe reactions triggering asthma. Long-term exposure to VOCs can lead to an increased chance of cancer, liver damage, kidney damage, and central nervous system damage.

Ammonia is a colorless gas at room temperature with a very pungent irritating smell. It is a toxic gas that is irritating to the eyes, nose, throat, and respiratory tract and if inhaled in great quantities, can lead to death. NH3 is a highly reactive, corrosive, alkaline gas that dissolves easily in water to form ammonium hydroxide. It is not highly flammable, but it may explode when exposed to high heat. The largest source of ammonia emission globally is NH3 emissions from ammonia-based fertilizers industries. The industrial sources of NH3 include the fertilizer manufacturing, coke manufacture, pharmaceutical and cleaning products, fossil fuel combustion, livestock management, and refrigeration methods.

4.3 Objective of the RFP

Considering the various ill effects of the VOC and other toxic gases as discussed above, it is one of the important goal of the Board to measure the VOC levels. The Board proposes to monitor the same using following two types of equipment

Handy VOC sampler – The sampler will be used by the concerned area field officer to collect the samples by means of sorbent tubes from the industries emitting VOCs. The sample will then be taken to the regional laboratories for analysing the samples and evaluation of precise reports for specific VOCs.

Continuous online VOC / Odour/ NH3 monitoring station- Due to the large number of specific Volatile Organic Compounds (VOCs) /odour /NH3 emitted from various types of industries, there is a need to monitor and quantification of the same on a continuous basis. The data collected/evaluated will be connected with online emission data at the MPCB and CPCB servers.

The objective of this RFP document is to choose a most suitable Supplier based on open etendering system. The RFP documents gives all the necessary information to the prospective bidders giving them equal opportunity to understand the technical requirements of the equipment and the Scope of Work expectations from the Successful Bidder / Supplier, once selected.

4.4 Tenure of the Contract

- a) The Successful Bidder will have to complete the one time supply, testing, training and handover of the Handy VOC Samplers to MPCB within THREE (3) months of LoA.
- b) The Successful Bidder will Supply, install, commission and undertake Operation and Maintenance (O&M) of the Continuous Online Monitoring Stations and seek a Certificate of Operation (CoOP) from MPCB within THREE (3) months of LoA.
- c) The Successful Bidder will be required to provide Warranty Services as defined in the Scope of Work for a period of ONE (1) year from the date of CoOP for all the equipment.
- d) The Successful Bidder will be required to provide Comprehensive Maintenance Services as defined in the Scope of Work for a period of FIVE (5) year from the date of end of Warranty for all the equipment.
- e) The Successful Bidder will be required to undertake Operation and Maintenance (O&M) of the Continuous Online Monitoring Stations during the warranty period and for FIVE (5) years.
- f) In case MPCB is not satisfied with the performance of the selected agency, MPCB reserves the right to terminate the contract with such agency.

4.5 Completeness of Response

- a) The response to this RFP should be full and complete in all respects.
- b) Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP document in every respect will be at the Bidder's risk and may result in rejection of its Proposal and forfeiture of the EMD.

4.6 Proposal Preparation Costs

- a) The bidder shall submit the bid at its cost and MPCB shall not be held responsible for any cost incurred by the bidder.
- b) Submission of a bid does not entitle the bidder to claim any cost and rights over MPCB and MPCB shall be at liberty to cancel any or all bids without giving any notice.
- c) All materials submitted by the bidder shall be the absolute property of MPCB and no copyright /patent etc. shall be entertained by MPCB.

4.7 Bidder Inquiries

- a) Bidder shall E-Mail their queries, as per the format as prescribed in the Annexure 3.
- b) The response to the queries will be published on https://mahatenders.gov.in. No telephonic / queries will be entertained thereafter.
- c) This response of MPCB shall become integral part of RFP document. MPCB shall not make any warranty as to the accuracy and completeness of responses.

4.8 Amendment of RFP Document

- a) All the amendments made in the document will be published on the e-Tendering Portal and shall be part of the RFP.
- b) The Bidders are advised to visit the aforementioned websites/portal on a regular basis to check for necessary updates. The MPCB also reserves the right to amend the dates mentioned in this RFP.

4.9 Supplementary Information to the RFP

If MPCB deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue supplements to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.

4.10 MPCB's right to terminate the process

- a) MPCB may terminate the RFP process at any point of time and without assigning any reason.
- b) MPCB reserves the right to amend/edit/add/delete any clause of this Bid Document.
- c) This will be informed to all and will become part of the bid /RFP and information for the same will be published on the e-Tendering portal.

4.11 Earnest Money Deposit (EMD)

- a) Bidders shall submit, EMD as defined in this RFP.
- b) Bidders are required to submit an Earnest Money deposit (EMD) online for an amount of INR 30,00,000 (INR Thirty Lakh Only) [DS6]Please refer RFP for the payment of the same. Bids of the bidders who have not paid the EMD as stipulated in this RFP, will be rejected by MPCB as non-responsive. No exemptions to this clause will be allowed
- c) Unsuccessful Bidders' EMD will be returned within 30 days from the date of finalization of the

tender. EMD of the successful bidder will be returned only after submission of the Performance Bank Guarantee.

- d) No interest will be paid by MPCB on the EMD amount and EMD will be refunded to all Bidders (including the Successful Bidder(s)) without any accrued interest on it.
- e) The Bid submitted without EMD or with EMD which does not conform to RFP clauses, mentioned in this document, will be summarily rejected.

4.12 The EMD may be forfeited:

- a) If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
- b) In case of a Successful Bidder(s), if the Bidder fails to sign the contract in accordance with the terms and conditions.
- c) If during the bid process, a bidder indulges in any such deliberate act as would jeopardise or unnecessarily delay the process of bid evaluation and finalisation.
- d) If, during the bid process, any information is found false/fraudulent/mala fide, and then MPCB shall reject the bid and, if necessary, initiate action.
- e) The decision of the MPCB regarding forfeiture of the EMD shall be final and binding upon bidders.

4.13 Authentication of Bid

- a) Authorized person of the bidder who signs the bid shall obtain the Power of Attorney from the bidder, which shall be submitted with the Bid.
- b) All pages of the bid and its annexures, etc. shall be signed and stamped by the person or persons signing the bid.

4.14 Language of Bids

- a) This bid should be submitted in English language only.
- b) If any supporting documents submitted are in any language other than English, then the translation of the same in the English language is to be duly attested by the bidder and submit with the bid, and the English translation shall be validated at MPCB's discretion.

4.15 Patent Claim

a) In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof,

the bidder shall expeditiously extinguish such claim.

- b) If the Successful Bidder fails to comply and MPCB is required to pay compensation to a third party resulting from such Infringement, the Successful Bidder shall be responsible for such compensation, including all expenses, court costs, lawyer fees etc.
- c) MPCB shall give notice to the Successful Bidder(s) of any such claim and recover it from the bidder.

4.16 Submission of Bids

The e-bidding process will be a TWO (2) bid system, comprising of the following two bids viz.

a) Envelope - 1 Technical Bid

The information to be submitted by the bidders as Envelope 1 are mentioned

b) Envelope – 2 Financial Bid / Price Bid

The information to be submitted by the bidders as Envelope 2 are mentioned in Section 6.2 and in the given BOQ Format

4.17 Bid Submission Instructions

Complete bidding process will be online (e-Tendering) in two (2) envelope systems. Submission of bids shall be in accordance to the instructions given in the Table below:

| Table: Documents Required | | | |
|-----------------------------|------------------------|--|----------------------|
| Sr.No. | Document Type | Document Format | Online Submission |
| Tende | r Fee &EMD an | d Eligibility Details - Envelope –1 | |
| 1. | Tender Fee | Online Payment of INR 20,000/- (+ 18% GST) & scanned copy of the receipt to be submitted online with the proposal [DS7] | Yes |
| 2. | EMD | Online Payment of INR 30,00,000/-& receipt [DS8] to be submitted online with the proposal | Yes |
| 3. | Technical Proposal | Eligibility criteria Proposal (Pre-qualification) shall be prepared in accordance with the requirements specified in Section 4.25 and 4.26 The Technical Proposal shall be prepared in accordance with the requirements specified in this RFP. | Yes |
| Commercial Bid- Envelope -2 | | | |
| 4. | Commercial Proposal | The Financial Proposal shall be prepared in accordance with the requirements specified in this RFP. | Yes |

a) The following points shall be kept in mind for the submission of bids;

- b) MPCB shall not accept delivery of the proposal in any manner other than that specified in this RFP. Proposal delivered in any other manner shall be treated as defective, invalid and rejected. Non-submission of the required documents or submission of the documents in a different format/content may lead to the rejection of the bid proposal submitted by the bidder.
- c) The bidder should ensure that all the required documents, as mentioned in this RFP/ bidding document, are submitted along with the bid and in the prescribed format only.
- d) The prices for the equipment, and Services components in all the cases MUST be quoted in Indian Rupees only.
- e) The Bidder is expected to price all the items and services sought in the RFP and proposed in the technical proposal. The Bid should be comprehensive and inclusive of all the services to be provided by the Bidder as per the scope of his work and must cover the entire Contract Period.
- f) MPCB may seek clarifications from the Bidder on the technical proposal. Any of the clarifications by the Bidder on the technical proposal should not have any commercial implications. The Financial Proposal submitted by the Bidder should be inclusive of all the items in the technical proposal and should incorporate all the clarifications provided by the Bidder on the technical proposal during the evaluation of the technical offer.
- g) Financial Proposal shall not contain any technical information. Similarly, a technical proposal with any financial cost related information shall be summarily rejected and the bidder shall be disqualified from the tender process.
- h) It is required that all the proposals submitted in response to this RFP should be unconditional in all respects, failing which MPCB reserves the right to reject the proposal.
- i) Proposals sent by fax/ post/ courier shall be rejected.
- j) It shall be the sole responsibility of the bidder to ensure that all the documents required for the Eligibility criteria and the Technical Evaluation of the bid are uploaded on the portal well within time and MPCB shall not entertain any re- presentation from any bidder, who fails to upload the requisite documents within the stipulated time and date on account of any technical issues related to low internet connectivity, size of the files to be uploaded, etc. Therefore, the bidders are notified that they must read the instructions/information given on the homepage of the e-tender portal and must understand all the nuances of technology in advance.

4.18 Late Proposal

Proposals received after the due date and the specified time (including the extended period if any) for any reason whatsoever, shall not be entertained and shall not be opened in the e-Tendering system.

4.19 Modification and Withdrawal of Proposals

- a) No Proposal shall be withdrawn in the interval between the deadline for submission of proposals and the expiration of the validity period specified by MPCB in the RFP.
- b) Entire EMD shall be forfeited if any of the Bidders withdraw their proposal during the validity period.

4.20 Non-conforming Proposals

A Proposal may be construed as a non-conforming proposal and ineligible for consideration:

- a) If it does not comply with the requirements of this RFP.
- b) If the Proposal does not follow the format requested in this RFP or does not appear to address the particular requirements of the MPCB.

4.21 Acknowledgement of Understanding of Terms

By submitting a Proposal, each Bidder shall be deemed to acknowledge that he has carefully read all sections of this RFP, including all forms, schedules, annexure, corrigendum and addendums (if any) hereto, and has fully informed itself as to all existing conditions and limitations.

4.22 Bid Opening and Evaluation Process

- a) Total transparency shall be observed and ensured while opening the Proposals/Bids. All Bids shall be opened in the presence of Bidder's representatives who choose to attend the Bid opening sessions on the specified date, time and address.
- b) MPCB reserves rights at all times to postpone or cancel a scheduled Bid opening.
- c) The Bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of Bid opening being declared a holiday for MPCB, the bids shall be opened at the same time and location on the next working day. In addition to that, if the representative of the Bidder remains absent, MPCB will continue the process and open the bids of all bidders.
- d) During Bid opening, preliminary scrutiny of the Bid documents shall be made to determine whether they are complete, whether required Bid Security has been furnished, whether the Documents have been properly signed, and whether the bids are generally in order. Bids not conforming to such preliminary requirements shall be prima facie rejected. MPCB has the right to reject the bid after due diligence is done.

4.23 Tender Evaluation Committee

MPCB shall form a Tender Evaluation Committee (hereinafter referred to as "TEC") to evaluate the bids.

- a) The TEC shall evaluate the responses to the RFP and all supporting documents/ documentary evidence. Inability to submit requisite supporting documents/documentary evidence, may lead to rejection.
- b) The decision of the TEC in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/discussion with the Committee.
- c) The TEC may ask for meetings with the bidders to seek clarifications on their proposals. The bidder shall submit requisite supporting documents/ certificates on the credentials. The committee may visit the bidder's client site to validate the credentials/ citations claimed by the bidder.
- d) The TEC reserves the right to reject any or all proposals entails the basis of any deviations.
- e) Each of the responses shall be evaluated as per the criterions and requirements specified in this RFP.
- f) The TEC would submit its decision to the competent authority whose decision would be final and binding upon the bidders.

4.24 Evaluation Process

- a) TEC shall review the proposal of the Bidders to determine whether the requirements as mentioned in Sections 4.25 and 4.26of the RFP are met. Incomplete or partial Proposals are liable for disgualification
- b) Bid Evaluation shall be conducted following Quality Cum Cost Based Selection (QCBS) methodology
- c) In the first stage, Technical Proposals shall be opened and evaluated as per the Minimum Eligibility criteria mentioned in Section 4.25 of the RFP. Bids not meeting the Minimum Eligibility Criteria will be summarily rejected
- d) Bids qualifying through the Minimum Eligibility Criteria will be further evaluated for their objective evaluation based on the Criteria mentioned in section 4.25. A cut off for the Technical score will be defined. The Technical scoring for respective bidders will be worked out as elaborated in Section 4.26
- e) In the Second stage, the Financial Proposal of those Bidders who qualify in Eligibility Criteria, shall be opened. All Bids shall be opened in the presence of Bidder's representatives who choose to attend the Bid opening sessions on the specified date, time and address. The Financial/Price Bids, of those bidders who do not achieve the cut off/minimum Technical qualification score, will not be opened.
- f) At the end of the two stages, Weighted Technical and Price bid scores (only of those bidders who qualify as per the minimum Technical Score) will be added to arrive at a Composite

score of each of the bidder. The Bidder with the highest Composite score will be declared as the Successful Bidder, subject to all supporting documentation being in order.

- g) Evaluation and award of Contract shall be done as per provisions of Maharashtra State Government Rules and rules defined in this RFP.
- h) Please note that TEC may seek inputs from their professional, external experts in the bid evaluation process.

4.25 Pre- qualification criteria

Minimum Eligibility Criteria is a set of PASS / FAIL criteria. Not complying to even one of the listed criteria will render a bid to be unresponsive. The Bidders must comply with each of the criteria listed below and should submit sufficient documentary proof as mentioned in the table.

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted |
|-----|-------------------|--|--|
| PQ1 | Legal Entity | registered in India and in operations for a period of at least last 5 (five) years as on last date of submission of bid. The bidder should be a company registered under the Companies Act, 2013 or the Companies Act, 1956 | a) General Information of Bidder along with Bidder's constituting documents such as MOA, AOA. |
| | | | b) Copy of Certificate of Incorporation/ Registration/ Partnership deed of Bidder/ LLP deed |
| | | | c) Copy of PAN Card |
| | | | d) Copy of GST Registration |
| | | a Limited Liability Partnership (LLP) registered under the LLP Act, 2008 OR Indian Partnership Act 1932 as amended time to time. | e) Copy of Power of Attorney format in RFP Annexure 1: document 6 |
| PQ2 | Turnover | The average annual turnover of the bidder for the last three (03) audited financial years should be more than INR 4.50 Crs (F.Y 2020-21, FY 2021-22, FY 2022-23) | a) Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/Chartered Accountant and |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted | | |
|-----|--------------------|--|--|--|--|
| | | | b) Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the format (Annexure 1 : document 7) | | |
| PQ3 | Net worth | Bidder shall have Positive Net Worth in each of the last Three (03) Financial Years. (F.Y 2020-21, FY 2021-22, FY 2022-23) | a) Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/Chartered Accountant and b) Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the format (Annexure 1: document 7) | | |
| PQ4 | Project Experience | a. Project Experience A The Bidder must have experience in Supply of Handy VoC Samplers during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 3.7 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 2.5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 2.0 Cr. b. Project Experience B — The Bidder must have experience in setting up Continuous Online VOC Monitoring Station during last seven (07) years as on last date of | a) Bidders shall submit copy of work order/ contract agreement mentioning the relevant scope of Work. b) Completion Certificate from the client OR In case of on-going project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, having received the payment matching the 'Minimum Project Value' of the partially completed project. c) Project Citation as per format specified in Section 7:7.1 (D) | | |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted |
|------|-----------------------------------|---|--|
| PQ5 | Certification | submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 8.0 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 5.0 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 4.0 Cr. The Bidder of OEM should have | Copy of valid Certificate as of |
| 1 00 | Cortinoation | valid ISO 9001: 2015/ ISO/ IEC 17000: 2020/ ISO 14000 certification | the date of bid submission. |
| PQ6 | Manufacturer's Authorization Form | The Bidder/OEM of the bidder should be a Manufacturer or Authorised Dealer / Distributor of the Manufacturer / OEM. | For Manufacturer: Self Declaration along with the compliance Form For Authorized Dealers / Distributor: Manufacturer's Authorization Form (MAF) from Manufacturer / OEM / Authorized Distributor Annexure 1 – Document 8 |
| PQ7 | Technical Compliance | The Equipment being proposed MUST be 100% compliant to the Minimum Technical Specifications / Requirement and the Bidder should be authorized by the OEM | Declaration by the respective Manufacturer /OEM on their letterhead giving 100% compliance to the specifications asked in the RFP and Authorization for the Bidder, duly signed and stamped, in the format given Annexure 1 – Document 9 |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted |
|-----|-----------------------|--|---|
| PQ8 | Office in Maharashtra | The bidder shall have office in Maharashtra or shall open office in Maharashtra within 15 days from date of issuance of LOA/LOI | Copy of existing office address proof like 7/12 (satbara)/ lease agreement/utility bill in the name of the bidder OR In the absence of an existing office in Maharashtra, the bidder must submit an undertaking to setup office in Maharashtra, on letterhead of firm signed by authorized signatory as per the format provided in the RFP in Annexure 1: document 11 |
| PQ9 | Blacklisting | The Bidder should not be blacklisted by any Central Government/ State Government / Union Territory (UT) / Urban Local Body (ULB)/ PSU in India for Unsatisfactory past performance, corrupt & fraudulent practices or any other unethical conduct either indefinitely or for a particular period of time as on last date of submission of bid. | A self-certified letter signed by the Authorized Signatory of the Bidder as per Annexure 1: document 12. |

Note: *The date, time, venue, and mode of the presentation will be separately communicated to eligible bidders.

4.26 Technical Bid Evaluation – Scoring

The Bids qualifying through the Minimum Eligibility Criteria will be graded as per the criteria mentioned in the table below.

^{**&}quot;Similar Works" means projects which involves successful manufacturing/ supplying, commissioning, operation and maintenance of handy VOC Samplers and Monitoring Stations for Central Govt/ State Govt/ PSU/ ULBs in India.

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents |
|------------|--|--|---------------|--|
| TE 1. | Financial Strength (15 Mar | rks) | | |
| TE 1.1 | The average annual turnover of the bidder for the last three (03) audited financial years should be more than INR 4.5 Crs (F.Y 2020-21, FY 2021-22, FY 2022-23) | Average Annual Turnover (in INR) (Cr) 1) < 4.5 Cr.: Disqualified 2) > = 4.5 Cr and < 7.0 Cr : 10 marks 3) >=7.0 Cr and < 9.0 Cr : 12 marks 4) >=9.0 Cr[DS9]: 15 marks | 15 | a) Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/ Chartered Accountant and b) Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the format Annexure 1: document 7 |
| TE 2. | Bidder's Relevant Strengt | h (65 Marks) | | |
| TE 2.1 | Bidders' Experience The Bidder must have experience in "similar works" during last seven (07) years as on last date of submission of bid as per following details: - a. Project Experience A The Bidder must have experience in Supply of Handy VoC Samplers during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 3.7 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 2.5 Cr. OR | Experience A (max 10 marks) Project value of maximum any three projects submitted 1) >=INR 3.70 Cr and < INR 5.40 Cr: 05 Marks 2) >=INR 5.40 Cr and < INR 7.10 Cr: 08 marks 3) >=INR 7.10 Cr.: 10 marks[DS10] Experience B (max 10 marks) Project value of maximum any three projects submitted. | 10 | a) Bidders shall submit copy of work order/ contract agreement mentioning the relevant scope of Work. b) Completion Certificate from the client OR In case of on-going project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, having received the payment matching the 'Minimum Project Value' of the |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents |
|-------------|--|--|---------------|--|
| | Three (03) projects with "Similar works" each costing at least INR. 2.0 Cr. b. Project Experience B – The Bidder must have experience in setting up Continuous Online VOC Monitoring Station during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 8.0 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 5.0 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 4.0 Cr. | 1) >=INR 8.0 Cr and < INR 12 Cr: 05 Marks 2) >=INR 12 Cr and < INR 16 Cr: 08 marks 3) >=INR 16 Cr.: 10 marks [DS11] | | partially completed project. c) Project Citation as per format specified in Section 7: 7.2 (B) |
| T.E. 2.3 | The Bidder should have experience of implementation of "similar works" Project at least 01 with separate demarcated physical boundaries in single work in last 5 financial years as on last date of bid submission date. | (max 10 marks) 1. >=1 and < 2 Projects: 5 marks 2. >=2 Projects:10 marks | 10 | a) Bidders shall submit copy of work order/contract agreement mentioning the relevant scope of Work. b) Completion Certificate from the client As per format specified in Section 7: 7.2 (B) |
| T.E. 2.4 | Completed orders for Operation and Maintenance of Online VOC monitoring Stations for at least One (01) Years in India and within last 5 | Number of completed orders: (max 15 marks) 1. >=1 and < 2 Projects: 10 marks | 15 | a) Bidders shall submit copy of work order/contract agreement mentioning the relevant scope of Work. |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents |
|------------|---|--|---------------|--|
| | (five) years as on last date of submission of bid. | 2. >=2 Projects:15 marks | | b) Completion Certificate from the client In case of on-going project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, having received the payment matching the 'Minimum Project Value' of the partially completed project. OR[DS12] c) Project Citation as per format specified in Section 7: 7.2 (B) |
| TE 2.5 | Support capability | | | |
| 2.5 A | Service Engineers | Number of Service Engineers / Staff: 1) Service staff ≥ 10 but <15: 3 marks 1) Service staff ≥ 20: 5 marks | 5 | a) Attested copy of the Employee Provident Fund registration letter / certificate |
| 2.5 B | The bidder must have at least 30 manpower on its payroll in India as on last date of submission of bid. | Number of Manpower on payroll: 1) < 30: 00 marks 2) >=30: 05 marks | 5 | a) Attested copy of the Employee Provident Fund registration letter / certificate |
| TE 2.6 | Certifications The Bidder/OEM of the bidder should have the following valid certification a) ISO 9001: 2015 certification b) ISO/ IEC 17000: 2020 | The Bidder shall have valid as on last date of bid submission. i.Only ISO 9001:2015 – 05 marks ii.ISO 9001:2015 and any one of the remaining | 10 | a) Copy of valid certifications as on bid submission date |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents |
|-------------|---|---|---------------|--|
| TE 3. TE | Presentation on | two certifications - 08 marks iii.All three certifications - 10 marks[DS13] For presentation in below | 20 | Presentation delivered |
| 3.1 | Implementation Methodology, Support and Operation and Maintenance Services proposed | categories: 1. Understanding of the project and the existing environment of MPCB stations, Web application integration, requirements & future requirements (04 marks) 2. Approach and Methodology for the Project (04 marks) 3. Project Plan and Proposed Project Management Methodologies (04 marks) 4. Proposed Technical Solution, Security solution, Gecurity solution, Risk Mitigation, report management, Alerts & notification, Tools) (04 marks) 5. Bidder's strategy to manage Continuous Online VOC Monitoring stations at various locations and Comprehensive O&M. (04 marks) | | by the bidder should depict Bidder's understanding of the business / functional requirements of the MPCB, the proposed solution and implementation approach. |
| | | Total | 100 | |

4.27 Commercial Bid Evaluation

- a) The selection of successful Bidders will be done on Quality cum Cost Based Selection (QCBS) methodology. The methodology and respective weightages are mentioned in the Section 4.28 below.
- b) The Bidders complying with the Eligibility Criteria mentioned in Section 4.25 and who have paid the Tender Fees and EMD Fees as specified in the RFP, shall be considered as "substantially responsive" bids.
- c) The Commercial Bids will be opened on the prescribed date in the presence of bidder representatives or as decided by MPCB.
- d) The bidders should necessarily give the commercial details in the format given in this RFP. The commercial proposals should be given in the prescribed format only and in accordance to the details, terms and conditions as mentioned in the RFP (hence the bidder is expected to understand the RFP in all respects).
- e) In case the selected bidder does not quote for or provision for cost/expenses required to meet the requirements of the RFP, the selected bidder shall be solely responsible for those and shall provide them, without any additional cost to MPCB.
- f) The bidder is expected to price all the items and services sought in the RFP and proposed in the Technical Proposal. In case a Bidder fails to mention the cost of a line item, the bidder will be disqualified from further evaluation. The Bid should be comprehensive and inclusive of all the services to be provided by the bidder as per the scope of its work and must cover the entire Contract Period.
- g) The Commercial Bids of non-qualified Bidders shall be rejected and EMD shall be refunded only after a work order is awarded against this tender to the Successful Bidder.
- h) In the event that any successful bidder withdraws or is not ready for engagement for any reason, MPCB may invite the Bidder with the Bidder having the second-best composite score.
- i) MPCB may extend the validity of this contract based on the mutual consent with the successful Consultant.
- j) The detailed roles and responsibilities of the Selected Agency are mentioned in the Scope of work.
- k) The Bid Evaluation Committee reserves the right to accept or reject any or all bids without giving any reasons thereof.
- MPCB does not guarantee that all line items from Commercial Format shall be utilized by MPCB. The actual line items used may be more or less. The payment shall be made for only those line items which are used based on the unit cost quoted for the particular item on actual work is undertaken. MPCB can vary the quantity by ±25% during the tenure of the contract and the successful bidder will have to undertake the deliverables at the rates mentioned in

the bid.

- m) The Bidder needs to account for all expenses in the Financial Bid including transport, insurance, consumables, training, etc. along with out of Pocket expenses due to Boarding, Travelling, Lodging and other related items. MPCB shall not be liable to pay any additional cost apart from that mentioned in the Commercial Bid Format filled by the bidder and as specified in the RFP.
- n) MPCB may seek clarifications from the bidder on the Technical Proposal. Any of the clarifications by the bidder on the Technical Proposal should not have any commercial implications. The Commercial Proposal submitted by the bidder should be inclusive of all the items in the Technical Proposal and should incorporate all the clarifications provided by the bidder on the Technical Proposal during the Technical Evaluation.
- o) The bidder shall fill in rates for all the line items. If the rate for any item is not provided by the bidder or provided in a format other than defined in this RFP, then MPCB reserves the right to reject the bid.
- p) The rates specified by the Bidder in this RFP for all line items shall be valid for the entire duration of the contract.
- q) The Commercial Proposal shall not contain any technical information.

4.28 Quality Cum Cost Based Selection (QCBS) Methodology for Evaluation of this RFP

The following methodology and weightages will be used for the objective evaluation of each of the bids.

1. Technical Bid Evaluation

- a) Based on the documentation submitted by each of the bids, the bids will be given a score out of Maximum 100. Each responsive Bid will be attributed a technical score denoted by the symbol "S(t)". The technical score shall be out of a maximum of 100 marks.
- b) If in MPCB's opinion, the Technical Bid does not meet the minimum technical specifications & service requirements or is otherwise materially deficient/inconsistent in any other aspect; the Bid shall be declared Technically Evaluated & Non-Responsive and shall not be considered for further evaluation.
- c) After technical evaluation, MPCB will rank the bidders in descending order of their technical scores with the top ranked bidder having the highest technical score. If any bidder is found to be technically inadequate to the requirements of MPCB, i.e. if S(t) <70, then that bidder's bid would be deemed non-responsive for further evaluation and would not be considered further in the bidding process.
- d) If in case, after technical evaluation, only one bidder is found to be responsive & eligible, i.e. if the technical marks of only one bidder are more than or equal to 70, the Board will decide an acceptable price band and open Price Bid of the only eligible bidder. If the price bid of the

bidder falls within the price band specified by the Board, the bidder will be declared as the SUCCESSFUL BIDDER.

2. Financial Bid Evaluation

- a) The price bids of only technically successful bidders whose technical Bids have been awarded 70 or more marks will be opened.
- b) The evaluation will carried out if Price bids are complete and computationally correct.
- c) Lowest Price bid denoted by symbol "P (m)" will be allotted a Price score of 100 marks. The Price score of all the bidders will be denoted by the symbol "S (p)". The Price score of other bidders will be computed by measuring the respective weighted Price bids against the lowest bid i.e. P (m)
- d) These Price scores will be computed as: S (p) = 100 * (P (m) / P(b)) where P(b) is the weighted Price bid of the bidder whose Price score is being calculated. The Price score shall be out of a maximum of 100 marks.

3. Computation of Composite score

- a) The composite score is a weighted average of the Technical and Price Scores. The weightages of the Technical vis-à-vis the Price score is 0.70 of the Technical score and 0.30 of the Price score. The composite score (S) will be derived using following formula:
 S = (S (t) * 0.70) + (S (p) * 0.30).
- b) Thus the composite score shall be out of a maximum of 100 marks and will be computed up to TWO (2) decimal points.
- c) The responsive bidders will be ranked in descending order according to the composite score as calculated based on the above formula. The highest-ranking vendor as per the composite score will be selected as Successful Bidder. However, in order to ensure that MPCB gets best solution in technical terms, MPCB reserves the right to enter into a negotiation with the bidder having the highest technical score and place an order with this bidder at a suitable price.

4. Award Criteria

- a) Final choice of MPCB to award this project to a suitable bidder to execute this project shall be made on the basis of composite scoring arrived at as per the formula mentioned above.
- b) The Bidder having the highest Composite Score will be termed as the Successful Bidder.
- c) In case, two or more bidders have the same composite scores, the Bidder with the highest technical score will be declared as the successful bidder. In case, two or more bidders have the same composite scores & technical scores, MPCB will decide further criteria of evaluation, which will be binding on all bidders to accept without contest.

4.29 RFP Selection Process

- a) MPCB through this Request for Proposal (RFP) intends to get quote only from reputed technically qualified bidders.
- b) All the bidders will be assessed against the Eligibility criteria mentioned in Section 4.25 and 4.26
- c) The financial offer of the bidders fulfilling the Eligibility criteria shall be opened for further evaluation. Bidders are also requested to submit their financial quotation in the format provided in the RFP.
- d) In case of discrepancies between rates quoted in amounts and in words by the bidder, the lower of the two will prevail and will be used to determine the Successful Bidders as per criteria provided in the RFP.
- e) If any information provided by the Bidder is found to be inaccurate at any stage of the RFP process,
- f) MPCB may, at its discretion, reject the offer and no correspondence will be entertained in this regard. Submission of wrong and/or false information may also disqualify the Bidder from any future work from MPCB.
- g) MPCB reserves the right to negotiate with the Successful Bidders as per CVC guidelines or any equivalent norms. If the negotiation becomes unsuccessful then MPCB may negotiate with the next qualified bidder.

4.30 Bid Validity

- a) The offer/proposals submitted by the Bidders shall be valid for a minimum period of 120 days after the last date of bid submission prescribed by the department.
- b) In exceptional circumstances, prior to the expiration of the bid validity period, the department may request bidders to extend the period of validity of their bids.
- c) The request and the responses shall be made in writing. In the event of such an extension, department shall request the Bidder for an extension of bid validity and submit new bid security to cover the extended period of validity of their bids.
- d) In the event of such extension, Bidders shall submit a new Bank Guarantee submitted as EMD to cover the extended period of validity of their bids.
- e) A bidder may refuse the request without forfeiting its bid security. A bidder granting the request shall not be required or permitted to modify its bid.
- f) If the date up to which the bid is to remain valid happens to be a holiday for the department, the bid shall automatically remain valid up to the next working day.

4.31 Price and Information

- a) The bidder shall quote for this project as per the requirements of the RFP and in the format mentioned in Annexure II (Format 1 and 2). The Bidder MUST quote for both the types of products along with its associated services i.e. (a) Handy VOC Sampler (b) Online VOC Monitoring Stations, along with Warranty, CAMC and Operation and Maintenance of Online VOC Monitoring Stations. In case a bidder fails to quote for any of the services, their bid will be considered as non-responsive and will not be considered for evaluation.
- b) The Bids from foreign suppliers can be in widely accepted currencies such as US Dollars or Euros. The prices for Indian components and services will be quoted in Indian Rupees. In case of multi-currency bids, the prices quoted will be converted to Indian Rupees with the Exchange rate as prevailing on the date of Price bid opening.
- c) The bidder should quote the fee considering all costs including the costs for insurance for the Warranty Period of ONE (1) year, travel/stay, daily allowance or any other allowances with respect to their staff deployed for the execution of this project before or after the award of the Contract. The bidders should study the Scope of Work as per Section 4, to have an understanding of all the associated costs of the project.
- d) The bidder should indicate the GST currently applicable and the same will be reimbursed at actual as applicable from time to time.
- e) The prices, once offered, must remain fixed and must not be subject to change for any reason whatsoever within the period of the validity of the proposal and the contract. No revision of the fee shall be made on account of any variations in costs of labour and materials, currency exchange fluctuations with international currency or any other cost component affecting the total cost in fulfilling the obligations under the contract. A proposal submitted with an adjustable price quotation or conditional proposal may be rejected as non-responsive.
- f) All costs incurred due to delay of any sort, which is attributable to the bidder, shall be borne by the bidder.

4.32 Payment Terms

- a) The following payment terms will be offered to the Successful Bidders upon completing the necessary formalities and rendering deliverables as mentioned in Section 5 (Scope of Work) and supply of equipment complying with Minimum Technical Specifications (Section 6).
- b) Within 15 days of MPCB issuing the LoI / LoA / Work Order, the Successful Bidder, at its cost, charges and expenses will submit a PBG for an amount equivalent to 10% of the value of the contract in favour of MPCB. The PBG shall be in the form of a guarantee/s of a Nationalised Bank acceptable to MPCB and shall be valid for 65 months from the date of issuance of the LoA.
- c) All the payments at each stage will be made after deducting penalties for the stage, if

applicable. The penalties applicable at various stages are mentioned in Section 4.33

Following payment terms (for Supply of Equipment only) will be offered to the Successful Bidders

1. For Bids in foreign currency

Payment of the foreign currency portion shall be made in Bidding Currency in the following manner:

- a) On Shipment: 80% of the Contract Price of the Goods shipped shall be paid by Sight Draft or through an irrevocable Letter of Credit opened in favor of the Supplier through the State Bank of India, Matunga Branch, Mumbai for the Order value, and upon submission of documents specified in section 15
- b) On Acceptance: 20% of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods and successful installation & commissioning upon submission of claim supported by the Certificate of Operation (CoOP) issued by the Purchaser along with the Performance security.
- c) The L/C will be confirmed at the suppliers cost. All bank charges shall be to the account of the beneficiary i.e. supplier. If L/C is requested to be extended/ reinstated for reasons not attributable to MPCB, the charges thereof would be to the suppliers' account.
- d) For supply components and associated installation costs, if any, quoted on Indian currency, payment shall be made in Indian Rupees within thirty (30) days of presentation of the Invoice along with CoOP from MPCB declaring that the Goods have been delivered and that all other contracted Services have been performed.

2. For Bids in Indian currency

- a) Against Supply, installation, commissioning and receipt of CoOP: 80% percent of the price of goods will be paid.
- b) The remaining 20% percent of the price of the goods and associated installation costs, if any, shall be paid to the Supplier within thirty (30) days after the date of the CoOP. [DS14][SH15]
- c) The payment towards the CAMC for Five years will be paid in FIVE (5) equal instalments in arrears i.e. at the end of each year of the CAMC after completion of the warranty period of ONE (1) year.
- d) All payments will be made vide a crossed cheque payable in Mumbai, within 30 days of submission of invoice, after deducting applicable TDS, if any.

4.33 Penalties

It is expected that the Successful Bidder will complete all the deliverables as per the given timelines and as per the expected and defined performance norms. In case there are any defaults/delays from the Successful Bidder during the various phases of execution, MPCB will levy penalties. The same will be recovered from the next stage payment or in the extreme case, by invoking the Performance Bank Guarantee. The maximum penalty is capped @ 10% of the contract value. In case the penalty amount breaches the @ 10% cap, MPCB may terminate the contract on account of unsatisfactory performance of the Service Provider. The various penalties are listed below

| Sr. | Project Phase | Penalty Type | Penalty Amount |
|-----|--|--------------------------------|--|
| No. | | | |
| 1 | Supply, installation and Commissioning of the Setup | Delay beyond 3 months from LoA | 1% of the order value for the delay of each week or part thereof |
| 2 | Warranty (1 Year) + CAMC (5 Years) | availability / Equipment not | For Handy Sampler: Rs. 2000/- per day of non-working For Online Monitoring Station: Rs. 10000/- per day of non-working |

- a) The total penalty amount will be capped at @ 10% of the order value. Should the penalty amount be more than the @ 10% cap, MPCB reserves the right to terminate the order and invoke the Performance Bank Guarantee.
- b) MPCB will consider a genuine request for an extension of time, if so made by the Successful Bidder, taking into account the reasons for such extension and grant extension of time at their discretion.
- c) MPCB shall record the reason in such action with facts and figures. The grace period will not be granted if the extension is necessitated due to the default on the part of the Successful Bidder.
- d) Applicable penalty shall be recovered along with GST from invoice, security deposit or both.

4.34 Indemnification

- a) The bidder, if selected as Successful Bidder, will agrees and undertake that, during the Term of the Contract, it shall indemnify and keep indemnified and otherwise save harmless, MPCB from any third party suits instituted against MPCB which are proved to be because of a direct consequence of the installation and/or use of equipment & services provided by the successful bidder.
- b) The Successful Bidder shall indemnify MPCB against all losses and claims in respect of death or injury to any of their personnel, which may arise out of or in consequence of the execution of the project and remedying of any defects therein, and against all claims,

proceedings, damages, costs whatsoever in respect thereof or in relation thereto.

4.35 Signature

- a) A representative of the bidder, who is authorized to commit the bidder to contractual obligations, must sign with the bidder's name and seal on all pages of the Bid, including the tender/bid document.
- b) All obligations committed by such signatories must be fulfilled.

4.36 Conditions under which RFP is issued

- a) This RFP is not an offer and is issued with no commitment. MPCB reserves the right to withdraw the RFP and change or vary any part thereof, at any stage. MPCB also reserves the right to disqualify any bidder should it be so necessary at any stage.
- b) Timing and sequence of events resulting from this RFP shall ultimately be determined by MPCB.
- c) No verbal conversations or agreements with any official, agent, or employee of MPCB shall affect or modify any terms of this RFP and any alleged verbal agreement or arrangement made by a bidder with any agency, official or employee of MPCB shall be superseded by the definitive agreement that results from this RFP process. Verbal communications by MPCB to bidders shall not be considered binding on it, nor shall any written materials provided by any person other than MPCB.
- d) Neither the bidder nor any of the bidder's representatives shall have any claims whatsoever against MPCB or any of their respective officials, agents, or employees arising out of or relating to this RFP or these procedures (other than those arising under a definitive service agreement with the bidder in accordance with the terms thereof).
- e) Until the Contract is awarded and during the validity of the Contract, bidders shall not, directly or indirectly, solicit any employee of MPCB to leave the department or any other officials involved in this RFP process in order to accept employment with the bidder, or any person acting in collusion with the bidder, without prior written approval of MPCB.

4.37 Right to the Content of Proposal

- a) All proposals and accompanying documentation of the Technical Proposal will become the property of MPCB and will not be returned after the opening of the Technical Proposals.
- b) MPCB is not restricted in its rights, to use or disclose any or all of the information contained in the proposal and can do so without compensation to the bidders.

c) MPCB shall not be bound by any language in the proposal indicating the confidentiality of the proposal, or any other restriction on its use or disclosure.

4.38 Non-Conforming Proposal

A proposal may be construed as a non-conforming proposal and ineligible for consideration if:

- a) It does not comply with the requirements of this RFP.
- b) It does not follow the format requested in this RFP or does not appear to address the requirements as specified by the directorate.

4.39 Correction of errors

- a) The bidder is advised to take adequate care while quoting the rates. No excuse for corrections in the quoted rate will be entertained afterwards.
- b) The corrections or overwriting in the bid document should be initialed by the person signing the Bid form.

4.40 Corrections to Arithmetic errors

- a) In case of discrepancies between the Commercial Bid calculated by the bidder in numbers and words, the lower of the two will prevail and will be used to determine the Successful bidders as per criteria provided in the RFP.
- b) Bidders shall accept correction of arithmetical errors. Failure to accept the correction in accordance with the same shall result in the rejection of the Bid.

4.41 Disqualification

The Bid from the bidders is liable to be disqualified in the following cases:

- a) Bid not submitted in accordance with the bid document.
- b) Technical Proposal contains details related to cost.
- c) The bidder qualifies the bid with its own conditions.
- d) During the validity of the Bid, or its extended period, if any, the bidder increases his quoted prices.
- e) Bid is received in incomplete form and/or received after due date and time.
- f) Bid is not accompanied by all requisite supporting documents.
- g) Information submitted in technical Bid is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the contract (no matter at what stage) or during the tenure of the contract including the extension period if any.
- h) Non fulfilment of any condition/term by the bidder.

4.42 Acknowledgement of Understanding

By submitting the proposal, each bidder shall be deemed to acknowledge that he has carefully read all sections of this RFP, including all forms, scope of work, schedules, annexure, corrigendum and addendums (if any) hereto, and has fully informed itself as to all existing conditions and limitations.

4.43 Site visit by Bidder

- a) The bidder may visit the relevant Section(s) / Departments at MPCB at any time to be agreed with MPCB and obtain for itself on his own responsibility all information related to any specific process.
- b) The visit may not be used to raise questions or seek clarification on the RFP. All such queries or clarifications must be submitted in writing.
- c) The cost of such visits to the site(s) shall be at the bidder's own expense.

4.44 Award Criteria

Post the evaluation process indicated in Section above, MPCB will award the Contract to the Selected Agency as defined in this RFP Section 4.28(4).

4.45 MPCB's Right to accept any Bid and to reject any or All Bids

MPCB reserves the right to accept or reject any Bid, and to annul the bidding process and reject any or all Bids at any time prior to the award of the Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for MPCB's action.

4.46 Letter of Award and Work Order

- a) Prior to the expiration of the period of bid validity, MPCB will notify the Successful Bidder(s) in writing or by fax or email, to be confirmed in writing by letter, that its bid has been accepted.
- b) The Letter of Intent will constitute the formation of the contract. Upon the Successful Bidder's furnishing of Performance Bank Guarantee, MPCB will promptly notify each unsuccessful bidder(s).

4.47 Acceptance of the Work Order

MPCB shall notify the Successful Bidder that its bid has been accepted through LoA and/or Work Order. The Successful Bidder shall confirm in writing the acceptance of such LoA/Work Order to MPCB within the stipulated time frame.

4.48 Failure to agree with the Terms & Conditions of the RFP / Contract

Failure of the Successful Bidder(s) to agree with the Terms & Conditions of the RFP / Contract shall constitute sufficient grounds for the annulment of the award, in which event MPCB may invite the next best bidder for negotiations or may call for fresh RFP.

4.49 Non-Disclosure Agreement (NDA)

The Successful Bidder(s) has to sign the Non- Disclosure Agreement with MPCB.

4.50 Performance Bank Guarantee (PBG)

Performance Bank Guarantee is governed for supplies and services as follows:

- a) The bidder shall carry out the supply and services in conformity with the requirements of the RFP, generally accepted professional and technically accepted norms relevant to such projects and to the satisfaction of MPCB.
- b) The Earnest Money deposited at the time of bid submission would be given back to the Successful Bidder on payment of Performance Bank Guarantee in the form of a Bank Guarantee.
- c) The selected bidder shall deposit the Performance Security as follows:
- d) The Successful Bidder shall at his own expense, deposit with MPCB, and Performance Bank Guarantee from a Nationalised Bank, of value and validity of 63 months, as defined this tender document.
- e) The Performance Bank Guarantee should be furnished within 15 Working Days from the date of issue of the Letter of Intent / Award.
- f) The Performance Bank Guarantee may be discharged/returned by MPCB upon being satisfied that there has been due performance of the obligations of the successful bidder under the contract. However, no interest shall be payable on the Performance Bank Guarantee.
- g) MPCB shall also be entitled to make recoveries from the Performance Bank Guarantee on the following grounds:
- h) Any amount imposed as a fine by MPCB for irregularities Committed by the bidder.
- i) Any amount which MPCB becomes liable to the Government /Third party on behalf of any

default of the bidder or any of his/her/their agent/ employees or staff.

- j) Any payment/fine made under the order/judgment of any court/consumer forum or law enforcing agency or any person working on his behalf.
- k) Any other outstanding amount.
- Once the amount under this clause is debited, the bidder shall reimburse the Performance Bank Guarantee to the extent the amount is debited within 15 days of such debit by MPCB failing which it will be treated as a breach of the agreement and may lead to termination of agreement with forfeiture of all amounts including interest free Performance Bank Guarantee in favour of MPCB.

4.51 Right to Vary the Scope of Work at the time of Award

- a) MPCB reserves its right to make changes to the scope of the work at the time of execution of the resultant Agreement.
- b) If any such change causes an increase or decrease in the total value of the contract, or the time required for the Bidder's performance of any part of the work under the resultant Agreement, whether changed or not changed by the order, it shall be based on the unit prices quoted by the Bidder. Based on the revised scope, payment shall be calculated based on unit prices and MPCB shall be liable to pay only the revised amount, irrespective of the Total Cost mentioned in the Contract.
- c) Payment to the Successful Bidder shall be made on an actual supply basis and completion of the scope of work and deliverables by the Bidder to MPCB's satisfaction.
- d) The decision of MPCB shall be final and binding upon the SSP.

4.52 Governing Laws

The contract shall be governed by the laws and procedures established by Govt. of India and the Government of Maharashtra, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/processing.

Section II: Scope of Work And Technical Specifications

5. Scope of Work

5.1. Stakeholders and their responsibilities

There are TWO (2) key stakeholders for the project viz. MPCB and Supplier (Successful Bidder). Broad roles of each of the stakeholder are mentioned below.

MPCB as the USER and project sponsor will ensure the definition of Technical Specifications of equipment to be supplied and Scope of Work. More specifically it will define the distribution list along with locations for final delivery of the Handy VOC samplers and finalise the locations for setting up of Continuous Online VOC Monitoring stations. The tentative Delivery and Distribution list to be given here (required from MPCB)

The Supplier will supply the equipment which is 100% compliant to the Minimum Technical Specifications as per RFP and deliver to the locations directed by MPCB at their own cost. The Supplier will be responsible for providing Maintenance services for the Warranty period of 1 year post supply and or commissioning of equipment and for FIVE (5) years of Comprehensive Annual Maintenance Services after completion of the Warranty period. The Supplier will also be responsible Operation and Maintenance of the Online Continuous VOC Monitoring Stations for Six (^) years from the date of CoOP.

The responsibilities of each of these stakeholders are broadly outlined here. These should be taken as broad guidelines only and mentioned here for necessary resource planning by the Bidders.

5.2. Responsibilities of the Supplier

A One time Activity Pre-dispatch (Factory) Inspection, Transportation to the destination, Commissioning wherever necessary:

This stage shall comprise the following:

1. Supply of equipment after Pre-dispatch (Factory) inspection (wherever necessary): The Successful Bidder will be liable for all the deliverables.

The Successful Bidder's aggregate liability in connection with obligations undertaken as part of the Work Order regardless of the form or nature of the action giving rise to such liability (whether in contract, tort or otherwise), shall be at actual and limited to the value of the Work Order. Indemnity would be limited to court awarded damages and shall exclude indirect, consequential and incidental damages. However, indemnity would cover damages, loss or liabilities, compensation suffered by MPCB arising out of claims made by its customers and/or regulatory authorities.

2. Pre-dispatch (Factory) inspection

The Inspection and Tests prior to shipment of Goods and at final acceptance; if required are as follows:

- a) After the goods are manufactured and assembled, inspection and testing of the goods shall be carried out at the supplier's plant by the supplier, prior to shipment to check whether the goods are in conformity with the technical specifications.
- b) Manufacturer's test certificate with data sheet shall be issued to this effect and submit along with the delivery documents.
- c) MPCB reserves the options to be present at the supplier's premises during such inspection and testing.
- d) The acceptance test will be conducted by the MPCB, their consultant or other such person nominated by the MPCB at its option after the equipment is installed at the MPCB designated site in the presence of supplier's representatives. The acceptance will involve trouble free operation. There shall not be any additional charges for carrying out acceptance tests. No malfunction, partial or complete failure of any part of the equipment is expected to occur. The Supplier shall maintain the necessary log in respect of the result of the test to establish to the entire satisfaction of the MPCB, the successful completion of the test specified.
- e) In the event of the ordered item failing to pass the acceptance test, a period not exceeding two weeks will be given to rectify the defects and clear the acceptance test, failing which, the MPCB reserves the right to get the equipment replaced by the Supplier at no extra cost to the MPCB.
- f) Successful conduct and conclusion of the acceptance test for the installed goods and equipment shall also be the responsibility and at the cost of the Supplier.
- g) Before the goods and equipment are taken over by the MPCB, the Supplier shall supply operation and maintenance Manuals together with Drawings of the goods and equipment built. These shall be in such detail as will enable the Purchase to operate, maintain, adjust and repair all parts of the works as stated in the specifications.
- h) The Manuals and Drawings shall be in the ruling language (English) and in such form and numbers as stated in the Contract.
- Unless and otherwise agreed, the goods and equipment shall not be considered to be completed for the purposes of taking over until such Manuals and Drawings have been supplied to the MPCB.
- j) On successful completion of the acceptability test, receipt of deliverables, etc. and after the MPCB is satisfied with the working of the equipment, the CoOp signed by the Supplier and the representative of the MPCB will be issued. The date on which such certificate is signed shall be deemed to be the date of successful commissioning of the equipment and the start of the warranty period.

3. Shipping and Other documentation to be provided by Successful Bidder

a) For Goods manufactured within India

Within 24 hours of dispatch, the supplier shall notify the purchaser of the complete details of dispatch and also supply the following documents by registered post/speed post and copies thereof by FAX or scanned copies by email.

- i. Two copies of the upplier's Invoice indicating, *inter-alia* description and specification of the goods, quantity, unit price, total value;
- ii. Packing list;
- iii. Certificate of country of origin;
- iv. Insurance certificate,;
- v. Railway receipt/Consignment note;
- vi. Manufacturer's guarantee certificate and in-house inspection certificate;
- vii. Inspection certificate issued by purchaser's inspector, if any and
- viii. Any other document(s) as and when required in terms of the work order.

b) For Goods manufactured abroad

Within 24 hours of dispatch, the supplier shall notify the purchaser the complete details of dispatch and also supply the following documents by Registered Post/courier and scanned copies thereof by email.

- i. Two copies of supplier's Invoice giving full details of the goods including quantity, value, etc.;
- ii. Packing list;
- iii. Certificate of country of origin;
- iv. Manufacturer's guarantee and Inspection certificate;
- v. Inspection certificate issued by the Purchaser's Inspector, if any;
- vi. Insurance Certificate:
- vii. Name of the Vessel/Carrier;
- viii. Bill of Lading/Airway Bill;
- ix. Port of Loading:
- x. Date of Shipment;
- xi. Port of Discharge& expected date of arrival of goods and
- xii. Any other document(s) as and when required in terms of the work order.
- Note: 1. The nomenclature used for the item description in the invoices(s), packing list(s) and the delivery note(s) etc. should be identical to that used in the contract. The dispatch particulars including the name of the transporter should also be mentioned in the Invoice(s).
 - 2. The above documents should be received by MPCB before the arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.

4. Transportation, Packing and Insurance

- a) Supplier is required to transport the Goods from Origin to a specified destination in India, defined as the Final Destination, transport to such destination, including insurance and storage, shall be arranged by the Supplier, and the related costs shall be included in the Price Bid.
- b) Supplier is required to transport the Buyback Goods out of MPCB locations. Transport

- shall be arranged by the Supplier, and the related costs shall be included in the Price Bid.
- c) The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.
- d) The packing, marking and documentation within and outside the packages shall comply strictly with any subsequent instructions ordered by the MPCB.
- e) For bids in Foreign Currency, in case of being a Successful Bidder, the Goods supplied shall be fully insured in Indian Rupees against any loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.
- f) In such cases the supplier shall arrange and pay for Cargo Insurance, naming MPCB as beneficiary and initiate & pursue claims till settlement, on the event of any loss or damage.
- g) The equipment to be supplied will be insured by the Supplier against all risks of loss or damage from the date of shipment till such time it is delivered at the MPCB site in case of bidders in Indian currency.
- h) The Insurance shall be for an amount equal to 110% of the value of the work order from within "warehouse to the final destination as specified in the work order on "all risk basis" including strikes, riots and civil commotion
- i) With a view to ensure that claims on insurance companies, if any, are lodged in time, the Supplier shall be responsible for follow up with their principals for ascertaining the dispatch details and informing the same to MPCB and he shall also liaise with MPCB to ascertain the arrival of the consignment after clearance so that immediately thereafter in his presence the consignment could be opened and the insurance claim be lodged, if required, without any loss of time. Any delay on the part of the Supplier would be viewed seriously and he shall be directly responsible for any loss sustained by the MPCB on the event of the delay.

5. Calibration of Equipment

Initial calibration of the equipment to be supplied

6. Installation and Commissioning (Only for Continuous Online VOC Monitoring Stations):

- a) The Handy VOC Samplers may not require elaborate installation and commissioning. However, training sessions should be conducted to all MPCB nominated staff for handling, operating and basic troubleshooting before handing over the equipment to the respective MPCB offices.
- b) However, configuration of the equipment, if any, should be done before handing over the equipment to the Board.
- c) The Continuous Online VOC Monitoring Stations will require detailed setting up, installation and commissioning efforts to be undertaken by the Supplier. While elaborate details are mentioned in the RFP, broad activities are mentioned herewith:
 - i. Checking the site conditions and ensure site readiness for successful commissioning.

Coordination with MPCB officers in case of any deficiencies

- ii. Erection and setting up the Shelter as per MPCB requirement (Bidder may seek clarifications and confirmation from respective MPCB RO about the exact locations, common requirements for the shelter, location specific requirements, if any).
- iii. Setting up of the internal amenities, facilities such as Earthing, Air Conditioning, Electricals, Fire Fighting equipment, furniture, etc.)
- iv. Setting up of the equipment within the shelter
- v. Establishing the Data Acquisition and connectivity with MPCB and CPCB portals
- vi. The size of the Data display Boards should be at least 8 feet x 12 feet

7. Documentation

The Successful Bidder / Supplier will ensure documentation including specifications, brochures, designs, drawings, calibration details, test reports, etc. should be provided and copies of the same submitted to seek the Certificate of Operation (CoOP) from MPCB

5.3. Warranty Support (ONE YEAR) and CAMC (FIVE YEARS post warranty)

- a) The Successful Bidder/Supplier will provide Warranty support for the equipment (including support equipment such as Air conditioning, Firefighting, Networking, electrical, furniture, etc.)
- b) The support will include repairs/replacement of the faulty equipment within one business day. Such repairs / replacement will be free of cost for MPCB. However, these will exclude consumables. The Successful Bidder/Supplier should ensure stocking/availability of spares/replacement equipment to meet this service requirement at their own cost.

Key activities during the warranty and CAMC support:

- a) Preventive Maintenance: Quarterly maintenance services to include cleaning of equipment, tuning and calibration, if and necessary. These will be pre-scheduled and fixed frequency visits with pre-intimation to MPCB. The Bidder should consider air sampling media for 6 years (1st year – tubes 1000, bags-1000, 2nd year- tubes 1250, bags-1250,3rd Year - tubes 1500, bags-1500, 4th year - tubes 1750, bags-1750, 5th year tubes 2000, bags-2000, 6th year tubes 2250, bags-2250)
- b) Break-down Maintenance: These will on call services. Services personnel should be deployed to correct the failed equipment
- c) Calibration: Six monthly (or as prescribed by MPCB) calibration check/re-calibration of the equipment should be undertaken by the Bidder

- d) Obtain permission from the MPCB and inform the O&M team for any assistance for which equipment is required to be sent for repairs. Supplier shall arrange substitute equipment to keep station operational within the given Services Levels defined.
- e) Keep the Air Monitoring Stations clean, well maintained inside as well as around the sites and in good working condition
- f) Security: It is the duty of the Supplier to secure the movable, immovable and other properties of the MPCB at the Air Monitoring Station. The Supplier shall indemnify the loss caused to the MPCB on account of any damage, loss or theft caused to the property of the MPCB

5.4. Operation and Maintenance (O & M) Services during Warranty Support (ONE YEAR) and CAMC (FIVE YEARS post warranty)

- a) The Successful Bidder will depute / station adequate qualified and empowered manpower to operate and maintain the Online VOC monitoring Equipment and setup.
- b) The Operation and Maintenance period will include ONE (1) year of warranty period and FIVE (5) years of post-warranty period.
- c) The Operation and Maintenance obligations of the Successful Bidder will be as follows
- d) Operation and Maintenance of all the commissioned equipment and amenities as supplied by the Supplier / Successful Bidder under the Contract including services during forced and planned outages and overhauls.
- e) The Supplier shall take over the entire Air Monitoring Station (including all equipment) for O&M
- f) The Supplier shall provide to the MPCB a monthly summary of all operation and maintenance activities performed by the Supplier during each month
- g) The Supplier shall operate the equipment as per the laid out standards in the operating manual of the equipment and providing data for ambient air to MPCB on daily basis in the suggested format. The daily monthly and yearly Reporting Formats are attached (Exhibit-1 to Exhibit-5)
- h) Provide data collected through the operation of the equipment on a daily basis in suggested output formats given in this RFP document
- Establish and maintain a daily and monthly and yearly reporting system to provide storage and ready retrieval of operation and maintenance data including such information necessary to verify calculations. The monthly reporting shall contain variances from targets.
- j) Provide access to the MPCB to the Air Monitoring Stations and its data at all reasonable times and as and when required.

- k) Provide the operational date required to all competent authorities including, the Government of India or concerned State Governments.
- I) Online transfer of data to MPCB/CPCB server and AQI server
- m) The Supplier shall ensure accuracy of the data provided as per standards
- n) The Supplier shall ensure periodic re-calibration of all the equipment as per manufacturer's instructions and maintain "Protocol Calibration"
- o) Handing Over of Station: On expiry/ closure/ termination of the Contract Agreement, stations shall be handed over to The Board in working condition to the satisfaction of the Board. Few or all the spares procured by the Supplier and unused as on date of handing over may be purchased by the MPCB at its discretion provided the Supplier is able to provide reasonability of the costs of such spares. In addition, the Supplier shall provide consumables equivalent to three months consumption on expiry/closure/termination of the Contract Agreement without any extra financial implication
- p) Relocation of Station: During the contract period, if the Board intends to shift station from one location of the city to another location, due to some reason - functional or otherwise, Supplier shall shift the station for which cost of shifting including dismantling, loading & transportation, reinstallation at new location and construction of foundation will be made by the Board at a mutual agreed cost.

5.5. Training:

- a) MPCB will nominate FIVE (5) key staff members for full scale training on the equipment being supplied. The training should be provided at actual equipment Manufacturing facilities (Abroad training - at any respective country of origin of equipment) by the Successful Bidder at their own cost, which should include travel, stay, food and training arrangements. MPCB will not pay any amount towards these expenses and hence Bidders should consider this cost as a part of their Bid value and quote accordingly.
- b) Successful Bidder will prepare Training documents for MPCB. The documents should include Operational Methodology and Basic troubleshooting along with problem reporting.
- c) The training Material should be lucid and preferably in power point (.pptx) format with supporting material. Atleast SIX (6) sets of such training documentation along with Softcopies should be handed over to MPCB.
- d) One round (may require multiple sessions depending on batches) of training to be completed immediately after commissioning and proof of the same to be attached for documentation requesting CoOP.
- e) Refresher course should be held on an yearly basis.

5.6. Responsibilities of MPCB

- a) Finalizing the locations for setting up Continuous Online VOC Monitoring Stations and ensuring site readiness as per the Supplier's requirements for implementation of at designated Regional Offices within reasonable time frame.
- b) MPCB shall identify and hand over the site for erection & commissioning of Air Monitoring Stations free from all encumbrances
- c) Facilitation of site readiness for installation as required by Supplier
- d) Provisioning of Electrical Power and connection to the shelter. Payment for the electricity consumed.
- e) Issue of CoOP to Supplier based on satisfactory reporting by Supplier.

5.7. General Guidelines

Working Hours: The site for each monitoring station operation should be manned by the one Instrumentation/Software Engineer. In addition, the Successful Bidder would arrange for a security of the site and equipment's through appointment for security agency (providing at least one security guards 24 x 7) throughout the day and Night.

Deployed system engineer should be available to on-site on call or schedule decided by MPCB to the respective the regions.

Insurance: Successful Bidder would bear the cost of insuring the equipment (Comprehensive) and facilities against any theft, fire and other applicable provisions during tenure of contract period including O & M with a copy to MPCB of an appropriate amount. Board shall reimburse the same to the successful bidder on submission documentary proof. However, insurance during commissioning shall be beard by the bidder.

EXHIBIT – 1 EQUIPMENT LIST

| Sr No | Brief Description | Qty. in nos. | | | |
|-------|---|--------------|--|--|--|
| 1 | Gas Analysers (Voc/Odour/NH3) | 1 Unit | | | |
| 2 | Multi-calibration systems for gaseous monitors | 1 Unit | | | |
| 3 | Meteorological Instrument at ion comprising Wind direction, Wind speed, Ambient temperature, Relative humidity, Solar Radiation and Rainfall mounted on telescoping crank up meteorological Mast. | 1 Set | | | |
| 4 | Computer system consisting of one PC along with Laser Printer and DAS at the monitoring station and One PC at central office with peripherals and software for data acquisition / Data display Board / transfer and system integration, telephone, Modem. | | | | |
| 5 | Modem | 2 Units | | | |
| 6 | Data display system – 8 feet x 12 feet with RCC foundation for base | 1 Unit | | | |
| 7 | Housing/Container for Continuous Automatic Monitoring Stations with Sampling line, Internal fitting, Instruments racks, Electrical and Gas line Fittings, Tools (electrical and mechanical). | | | | |
| 8 | UPS, 10 KVA (1 hr. full load back-up) | 1 Unit | | | |
| 9 | UPS, 5 KVA (2 hrs. full load back-up) | 1 Unit | | | |
| 10 | Split Air Conditioner (2 Ton capacity) | 2 Nos. | | | |
| 11 | RCC foundation, pillars miscellaneous works including civil and | | | | |

EXHIBIT – 2 STATION PROTOCOL FOR CONTINUOUS ONLINE VOC MONITORING STATION Name of station: Date:

| | Parameter | Status | Zero | Value | Zero (| Offset | | Calibra | ation | | actor pan) | Remark |
|----------|------------------------------------|--------|------|-------|--------|--------|----------------|---------|-------|-----|---------------|--------|
| S. N. | raidillelei | Status | Pre | Post | Pre | Post | Span Source | Pre | Post | Pre | Post | |
| | NH3 | | | | | | | | | | | |
| | BTX Analyzer | | | | | | | | | | | |
| | Benzene | | | | | | | | | | | |
| | Toluene | | | | | | | | | | | |
| 1 | E-benzene | | | | | | | | | | | |
| | M+P Xylene | | | | | | | | | | | |
| | O-Xylene | | | | | | | | | | | |
| | Meteorological Parameter | | | | | | | | | | | |
| | Temperature | | | | | | | | | | | |
| | Humidity | | | | | | | | | | | |
| 2 | Wind Speed | | | | | | | | | | | |
| | Wind Direction | | | | | | | | | | | |
| | Solar Radiation | | | | | | | | | | | |
| | Rain Fall | | | | | | | | | | | |
| 3 | Computers | | | | | | | | | | | |
| 4 | UPS/ACs/Others | | | | | | | | | | | |
| 5 | Data Display Board | | | | | | | | | | | |
| 6 | Maintenance Details Requirement | 1 | | | | | | | | | | |
| | Specific Observation(s) | | | | | | | | | | | |

| Station Maintained By | <i>/</i> : | Station Su | pervised By | /: | |
|-----------------------|------------|------------|-------------|----|--|
| | | | | | |

EXHIBIT - 3 DAILY REPORTING FORMAT FOR METREOLOGICAL PARAMETERS

(To be submitted DAILY @ 1200 Hrs Noon for the previous day ending @ Midnight 2400 Hrs) Name of station:

Date:

| Hrs. | Wind Screen | Wind Direction | Humidity | Temperature | Solar Radiation | Rainfall | Remarks |
|---------|----------------|-------------------|----------|-------------|--------------------|----------|---------|
| 00-01 | | | | | | | |
| 01-02 | | | | | | | |
| 02-03 | | | | | | | |
| 03-04 | | | | | | | |
| 04-05 | | | | | | | |
| 05-06 | | | | | | | |
| 06-07 | | | | | | | |
| 07-08 | | | | | | | |
| 08-09 | | | | | | | |
| 09-10 | | | | | | | |
| 10-11 | | | | | | | |
| 11-12 | | | | | | | |
| 12-13 | | | | | | | |
| 13-14 | | | | | | | |
| 14-15 | | | | | | | |
| 15-16 | | | | | | | |
| 16-17 | | | | | | | |
| 17-18 | | | | | | | |
| 18-19 | | | | | | | |
| 19-20 | | | | | | | |
| 20-21 | | | | | | | |
| 21-22 | | | | | | | |
| 22-23 | | | | | | | |
| 23-24 | | | | | | | |
| Min. | | | | | | | |
| Max. | | | | | | | |
| Average | | | | | | | |

| Station Maintained By: | Station Supervised By: |
|------------------------|------------------------|
|------------------------|------------------------|

EXHIBIT - 4

| ort for N | Month of: _ | | Name | passed mon of station: | | [| Date: |
|-----------|----------------|-------------------|----------|------------------------|--------------------|----------|---------|
| Date | Wind Screen | Wind Direction | Humidity | Temperature | Solar Radiation | Rainfall | Remarks |
| | | | | | | | |
| | | | | | | | |
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| X. | | | | | | | |

| Station Maintained B | v: | Station Supervised By: |
|----------------------|----|------------------------|
| | | |

6. Minimum Technical specification

<To be printed on letterhead of the OEM and should be supported by relevant certifications as mentioned against various specifications>

6.1. Equipment Name: Handy VOC Sampler along with Sorbent Tubes and Sampling Bags with Septum Fittings

Qty: Samplers – 115 Sorbent Tubes – 1000

Sampling Bags with Septum fittings: 1000

Delivery Location: As per distribution list given by MPCB

| S.No. | Parameters | Details | | |
|-------|---|--|--|--|
| 1 | Flow Range in Constant Flow Mode | 20 to 500 ml/min | | |
| 2 | Compensation Range in Constant Flow Mode | 20 to 500 ml/min | | |
| 3 | Pressure Range in Constant Pressure Mode | 1 to 20 inches water | | |
| 4 | Flow Control System | Corrects for changes in back pressure, temperature, and atmospheric pressure | | |
| 5 | External Features | Touch screen for easy programmability. Bluetooth communication with PC and Data Recording Software. > 20+ hour run times at 500 ml/min with powerful Li-lon battery | | |
| 6 | Provision for exhaust port | Provision for Exhaust port for direct filling of sample bags. | | |
| 7 | Battery charger | Smart battery charger should have a magnetic connector for easy and quick connect facility. | | |
| 8 | Display type / Parameters | High-contrast backlit LCD. It should display Time, date, battery status, flow rate, sample volume, temperature, Atmospheric pressure, back pressure, programmed run remaining time and elapsed run time. | | |
| 9 | Auto restart facility | Equipment should be able to restart automatically when flow fault is cleared . | | |
| 10 | Multi-tube sampling | Equipment should be capable to program with Multi-tube sampling with up to four tubes simultaneously. | | |

| 11 | Accuracy | Constant flow control: ± 5% of set-point or ± 3 ml/min, whichever is higher Atmospheric pressure: ±0.3 in Hg Temperature: ±1.0 C Real-time clock: ±1% Constant pressure mode: ±0.5 inch water |
|-------|--------------------|---|
| 12 | Temperature Ranges | Operating: 32 F to 113 F (0 to 45 C) Charging: 32 F to 113 F (0 to 45 C) Storage: -4 F to 113 F (-20 to 45 C) |
| 13 | Humidity Range | ≤ 95% RH, non-condensing |
| 14 | Power | Removable rechargeable Lithium-ion (Li-Ion) battery, 3.6 V, 2.6 Ah, 9.36 Wh or USB charger |
| 15 | Run Time (Li-Ion) | 20+ hrs at 500 ml/min up to 20 inches water back pressure, extended run times available with charger |
| 16 | Charging Time | ≤ 10 hrs(Fast Charging:≤4.5 hrs to 80% charge) |
| 17 | Weight & Size. | Sampler should be small size in size and should not weight more than 250 Grams including rechargeable battery. |
| 18 | Certification | Intrinsic safety: Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III, T4; Class I, Zone 0, Group IIC T4; Exia -20°C ≤ Ta ≤ 45°C II 1G Exia IIC T4 Ga; IECEx UL 16.0113 DEMKO 16ATEX 1600; CE 0539 Battery safety certificate for use of Samplers in all type of Industry premises. |
| 19 | Case Material | Tough IP 64-rated impact-resistant case with rubber over molding |
| A1 | | |
| S.No. | Parameters | Details |
| 1 | Sorbent Tube, | Anasorb CSC |
| 2 | Sorbent Material: | Coconut Shell Charcoal, |
| 3 | Tube size | Ф6 x 70-mm size |
| 4 | No. of sections | 2 sections, 50/100 mg sorbent, 20/40 mesh |
| 5 | Tube cover | Type A tube cover, |
| 6 | Pack size | Pk/50 |
| A2 | | |
| S.No. | Parameters | Details |
| 1 | MOC: Tedlar | Tedlar |
| 2 | Capacity | 1-liter Sample Bag |
| 3 | Fittings | single polypropylene septum fitting which combines the hose / valve and the septum holder into one compact fitting. |
| | | |
| 4 | Thickness: | 2 mil External dimensions: 8 x 10 inches |

6.2. Equipment Name: Continuous Online VOC Monitoring Station – Qty: 6

Delivery Locations (Tentative): Tarapur, Taloja, Roha, Mahad, Lote Parashuram, Kurkumbh

Final Locations will be decided by respective Regional Officers of designated RO

| Sr | Item/Analyzer Name | Total Qty |
|-----|--|--|
| 1. | Monitoring Station foundations. | Actual |
| 2. | Air Conditioner, Split Type, Wall mounted along with voltage stabilizer(2X 2 ton). at the Station | Two |
| 3. | Online UPS(1X10KVA, 1hr. backup and 1X5KVA, 2hr. backup) at the Station | Two |
| 4. | SamplingSystemhaving10portmanifold | One |
| 5. | 19"Rack cabinet to accommodate all analyzers &systems | Three |
| 6. | Gas Analysers (VOC /Odour/ NH3) | One |
| 7. | Multi calibration System for Gas calibration and Meteorological, Flow and Electronic Calibration | One set |
| 8. | Meteorological Sensors for Wind Direction, Wind Speed, Ambient Temperature, Rainfall, Relative Humidity, Solar Radiation and Telescoping Crank – up Meteorological Tower | One set |
| 9. | IT PERIPHERLS: | |
| | (a)Data Acquisition System(DAS):One for each Station | One |
| | (b)Computer System for DAS: One for each Station | One |
| | (c)Computer System for AQI: One for each Station | One |
| | (d)Laser Printer Color MFP: One for each Station | One |
| | (e) Central Data Acquisition and Management System: One at MPCB HQ | One |
| | (k)Remote Calibration &Validation Software. | One |
| 10. | Data display Board Transmission Device (two nos) (One for Data Display Board near the station & other for data display at SPCB display board*) | Two |
| 11. | Continuous Automatic Monitoring Stations with Sampling line, Internal fitting, Instruments racks, Electrical fittings and Gas line fittings, Tools (electrical and mechanical), Data display system, Recommended spares in a Housing Container OR Continuous Automatic Monitoring Stations with Sampling line, Internal fitting, Instruments racks, Electrical fittings and Gas line fittings, Tools (electrical and mechanical),Data display system, Recommended spares without a Housing Container | One set OR One set w/o container |
| 12. | Lease Line for Internet AND Broadband (for Station) AND Data Card as mode Communication system (for display Board) | One set |
| 13. | RCC foundation, pillars misc. works including Caging, civil & electrical work (for stations as well as Data Display Boards) | Actual |

6.2.1. Components of housing for Continuous Online VOC Monitoring Stations

a) Housing/Container: It is designed for housing the Continuous Online VOC Monitoring Equipment / Instruments to protect them from dust and heat. Temperature and Humidity sensors shall be installed in the housing for checking the humidity and temperature inside the station. Three Nos. 19" racks shall be installed inside the station so that the analyzers

are easily accessible from front & back for calibration and maintenance.

b) Dimensions: Insidelength:4200 mm

Inside width: 3500 mm

height: 2500 mm (As per the Drawing given)

- c) Frame: All the material used for the construction of the floor, frame, roof frame etc, the 4 corner posts and 8 integrated, reinforced container corners should be of metal. The exterior panel of the container shall be made of a pre-coated MS Sheet of the approved colour shade. All other steel parts should be hot dipped galvanized having a minimum rate of galvanization of 275 grams per square meter(IS277). All joints of like metal such as steel-to-steel or aluminium-to-aluminium shall be protected against corrosion by the liberal application of joining compound. All joints of dissimilar metals such as steel to aluminium shall be protected against corrosion due to galvanic action by liberal application of dielectric compound as well as jointing compound on both mating surfaces. For lifting/fixing the container, International Standard eyebolts should be provided at the corners.
- d) Panelling: The outer panelling will be of 1.2 mm of Pre-coated MS sheet to with stand external impacts and abrasions. Outer side of the MS Sheet i.e. the exposed face of the sheet, shall be permanently colour coated with silicon-modified polyester coating of dry film thickness (DFT) 20 micron (min.) of approved colour shade over primer. Inner face of the sheet shall be provided with a suitable pre- coating of a minimum 7 micron off-white colour. The inner panelling will be of PVC coated 2 mm thick aluminium sheet, fixed over an inlay of 4 mm marine plywood. 100 mm thick polyurethane insulation will be used between the outer and inner walls (Pre-coated MS sheet and Marine plywood) as insulating material. Z spacers if required shall be made out of at least 2 mm thick galvanized steel sheet of grade 275 as per IS:277
- e) Floor: The floor will be laid in the frame of 600 x 600 mm centre to centre with 50 x50 x6 mm MS angle. The floor surface will be of 19 mm marine plywood covered with robust quality Vinyl flooring, 2 mm thick of approved colour. The floor should be of acid and alkaline resistant, waterproof, easily cleanable/washable. Bottom plate of thickness 2 mm hot dipped galvanised MS Plate shall be provided.
- f) Outer Door: One door of size 2000 x 900 mm will be provided at the front side (L = 4200 mm) of the station with isolated 3 point locking & door handle flush fitted.
- g) Electric Power Supply Box: Three phase (3 Ø) electrical wiring will be laid in ducts. Copper wiring of the appropriate gauge will be used. The terminal board should be mounted in a central power distribution box. Over voltage protection for each phase shall be provided along with the lightning arrestor. 2 numbers Emergency cut off switch & Thermostat switch (max 350C) for power disconnection, 6 free sockets and 3 fluorescent lamps for lighting will be provided.
- h) The station shall be properly grounded with chemical earthing or as per BIS Standards with proper plate and only copper strip at least on 2 corners (diametrically opposite). One three phase energy meter (Digital Type) shall be installed. Weatherproof

Inside

cubicles/enclosure for housing of MCB / TP & N Switch of main power termination (outside shelter) and weatherproof telephone junction box for terminations of telephone line are to be provided. Proper earthing for the telescopic mast of the meteorological system shall be provided. There should be conduction between the telescopic mast of the meteorological system and the station. The guy ropes or wires shall be provided for supporting the mast

i) List of Consumables

i. All fuses: 2 sets
ii. Lightning Arrester: 2 sets
iii. Emergency Switches: 2 pcs
iv. Thermostats: 1 pc

- j) Partitioning for Calibration Gas Cylinders, Meteorological Mast and UPS: The housing will be partitioned as per the drawing to create space for storing of gas cylinders, Meteorological mast & UPS. The size will be 2000 x 1400 x 2300 mm. A lockable door of size 900 x 2000 mm along-with 3 − Point locking system shall be provided on the outer wall of the housing. A 300 mm, single-phase (230 volts □ 10 volts AC and 50 Hz □ 3%) exhaust fan with safety grills will be provided. Mounting brackets in 2 levels for fixing of at-least 06 (six) gas cylinders should be provided. The internal lights of the housing should be sensor-based.
- k) Air conditioners shall be mounted on proper rust proof supporting structures with rubber blocks to avoid vibration of structures. Proper caging/grill should also be provided for the safety of ACs. Sun shades for external AC units shall be provided with fabricated precoated MS sheet (same as the monitoring station) with supporting arrangements. AC unit's external piping shall be placed in GI trays. Cable trays fixed on the exterior wall shall be covered with a pre-coated MS sheet, of the same colour shade of the monitoring station. Roof top sheet is to be levelled and sloped properly. Rain water spout shall be fixed at top with rain water down the pipe at two corners. The external lights of the station should be Solar operated.
- I) Station Furnishing:

19"racks – 02Nos.

Fire extinguishers - 02Nos.(Clean Agent-2KGeach)

Furniture:

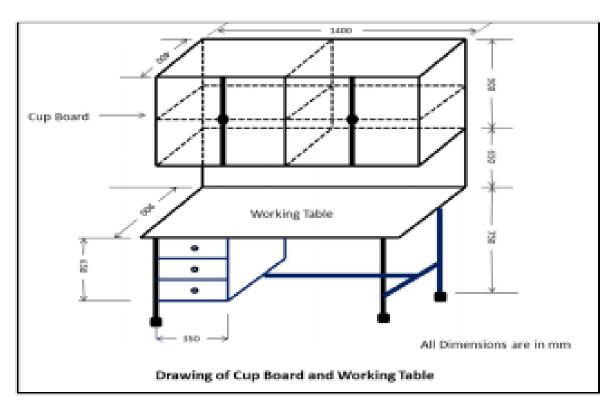
Material - Furniture made of water-resistant laminated board

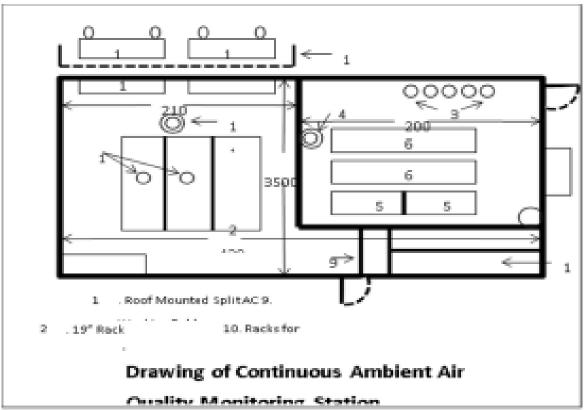
Cupboard - As per drawing

Working table – Powdered coated MS frame size 1400x900x750 mm (w x d x h)

and top 19 mm thickness Board

Revolving tilting chair – 02 Nos.





m) Miscellaneous:

- The exhaust gases from the analyser should be collected and discharged by a common exhaust pipe and vented.
- Folding aluminium ladder for roof access (Length... with 1 feet width steps)
- Sensor for measuring the inside temperature of the station and Display
- Hygrometer for measurement of Humidity inside the station and Display
- Mounting bracket for the ladder
- No smoking stickers
- Vacuum cleaner with minimum100 watt power
- Tool Kit having following tools:
- One screw driver set
- One Digital multi-meter (Philips, Micro or equivalent make)
- One box spanner set
- One D spanner set
- One watchmaker set
- One Hammer set
- One precision screw driver set
- One pliers set
- One Tong tester
- One Soldering Iron with a stand
- One Emergency LED Cluster light
- n) Sign boards along-with the logo of Central Pollution Control Board, Delhi / State Pollution Control Board, to be embedded with size the 1500 x 900 mm on the front of the container and on the two side of the container, The name of the Station i.e. Continuous Ambient Air Quality MONITORING Station, (Location) both in English and Hindi or local language to be inscribed. The Signs boards to be mounted on the station with proper spacers
- o) RCC Foundation for Monitoring Stations:

Dimensions: L X W (6000 x 6000 mm)

Height: 300 mm from Ground

Pillars: Nine concrete pillars of 300 mm above the ground level and below the ground level with 200 x 200mm beam and between pillar bricks to be used for filling the space (**concrete ratio of 1:2:4**). Outer wall of the foundation to be plastered with 1:4, Cement: Sand ratio and same has to be painted with weather proof coat.

Top of the platform: RCC 150 mm with a concrete ratio of 1:1:2 and to plaster and painted with weather proof paint.

Staircase: RCC Steps to approach the main door of the container and the UPS / Gas room door in the side to be provided and each step should not be more than 150 mm

p) Split Air Conditioners:

- i. Type and Capacity: 2 Nos. split type, 2 ton cooling only capacity Inverter AC, roof mounted of 5 star rating with an automatic timer. Separate Automatic Voltage stabilizer will be provided with each unit.
- ii. The indoor units should be running alternately at an interval of four hours with timer control and the temperature inside the station should be maintained at 25⁰C inside during all the time including peak summer months.
- iii. Key Features / Specifications (2 Tons: Qty-1)
- iv. Cooling Capacity: 7000W (for 2 Tons)
- v. Star Rating: BEE 5star Inverter with Cooper Coil
- vi. Indoor Noise Level: 40-50dbA (cooling)
- vii. Control Type: Remoteviii. Compressor: Inverterix. Refrigerant: Eco Friendly
- x. Feature: filter clean Indicator, defrosting Sensorxi. Power supply:230 volts □10volts AC and 50Hz □3%
- xii. Standard Warranty xiii. Remote: LCD Wireless

q) Uninterrupted Power Supply (UPS):

Three phase 10 KVA UPS: Three phase 10 kVA UPS along with Automatic Delayed Restoration Device (ADRD) with 1 hour backup in full capacity should be provided for the smooth operation of one 2 Ton capacity split AC at the station. <u>Automatic Phase Sequencer Device has to be installed along with the UPS</u>

| a) | Capacity | | : | 10.0kVA |
|----|--------------|------------------|---|---------------------------------|
| b) | Technology | | : | PW Musing IGBT/MOSFETS |
| c) | Crest Factor | | | Morethan3:1 |
| d) | Input | Voltage | : | 415VAC |
| , | • | Voltage Range | : | ±25% |
| | | Frequency | : | 50Hz±3% |
| e) | Output | Voltage | : | 230VAC |
| | | Voltage | : | ±1% |
| | | regulation | | |
| | | Frequency | : | 50Hz |
| | | Frequency | : | ±0.01% |
| | | regulation | | |
| | | Waveform | | Pure sinewave |
| f) | Battery | Battery type | : | Sealed maintenance free |
| , | • | Back up time | : | 1Houratfull load |
| | | Battery Capacity | | For required backup time |
| | | Recharge time | : | 5hrsto90%aftercompletedischarge |
| g) | Distortion | | : | Lessthan1%onlinearload |
| h) | Power factor | | : | 0.9to1 |

| i) | Indicator | | | L.E.D. – Battery Charge, Load level, on Line, over load, on battery, replace battery |
|----|-------------------|-----------------------|---|--|
| j) | Alarm | | | Audible alarm for battery backup, battery low, and fault |
| k) | Protections | Surge | | Surge suppression meets BIS or International standard |
| | | Overload | : | Fuse & current limited |
| | | Short circuit | : | Fuse & current limited &cut-off |
| | | Battery low cut – off | : | No battery drain after cut-off |
| l) | Overload Capacity | | : | 110%forcontinuousload |
| m) | Efficiency | | : | Morethan90% |
| n) | Environment | Operating Temp. | : | 0-50 ⁰ C |
| , | | Operating Hum. | : | 10%to95%(Non condensing) |
| | | Audible Noise | : | Less than 45db(at1 meter) |

Single Phase 5 KVA UPS: Single Phase 5 KVA UPS along with Automatic Delayed Restoration device (ADRD) with 2 hours backup in full capacity should be provided for the smooth operation of the Analyzers and Peripherals at the Station.

| Capacity | | : | 5.0Kva |
|--------------|----------------------|---|--|
| Technology | | | PWM using IGBT/MOSFETS |
| Crest Factor | | : | Morethan3:1 |
| Input | Voltage | : | 230VAC |
| | Voltage Range | : | ±25% |
| | Frequency | : | 50Hz±3% |
| Output | Voltage | : | 230VAC |
| | Voltage regulation | : | ±1% |
| | Frequency | : | 50Hz |
| | Frequency regulation | : | ±0.01% |
| | Waveform | : | Pure sinewave |
| Battery | Battery type | | Sealed maintenance free |
| _ | Back up time | | 2Hoursatfullload |
| | Battery Capacity | | For required backup time |
| | Recharge time | | 5hrsto90%aftercomplete discharge |
| Distortion | | : | Lessthan1%onlinearload |
| Powerfactor | | : | 0.9to1 |
| Indicator | | : | L.E.D. – Battery Charge, Load level, on Line, over load, on battery, replace battery |
| Alarm | | : | Audible alarm for battery backup, battery low and fault |
| Protections | Surge | : | Surge suppression meets BIS or |
| | | | International standard |
| | Overload | : | Fuse ¤t limited |
| | Short circuit | : | Fuse & current limited &cut - off |
| | Battery low cut-off | : | No battery drain after cut-off |

| Overload Capacity | | : | 110%forcontinuousload |
|-------------------|--------------------|---|---------------------------|
| Efficiency | | : | Morethan90% |
| Environment | Operating Temp. | : | 0-50 ^U C |
| | Operating Humidity | : | 10%to95% (Non-condensing) |
| | Audible Noise | : | Lessthan45db(at1 meter) |

6.2.2. Continuous Online VOC monitoring Analyser for NH3, VOC AND ODOUR

- a) General Specifications for all analysers
- i. The analyzers should be 19" rack mounting model with facilities for fixing the analyzers from the front side.
- ii. The front panel preferably have an ON/OFF Switch.
- iii. The display of the entire important status signal viz. Sample flow, temperature, concentration, range selection, manual / auto mode, zero / span mode and all error messages should be on the front panel.
- iv. The analyzers should operate at operating voltage230 volts +/- 10volts AC and 50Hz+/-3% frequency. The power supply input to be protected against spikes from and to the analyzer by an LC filter. The power connection cable should be CEE type complete with a 15 Amperes plug adaptable to the Indian mains socket.
- v. The analyzers must function properly in Indian conditions without any defect between $0-40^{\circ}\text{C}$ ambient temperature, 10-95% relative humidity and in high ambient dust levels. The data capture rate should not be less than 90% of operational time.
- vi. The Manufacturer shall provide comprehensive hands-on training for operational & preventive maintenance for one week in the respective State for three persons per station.
- vii. The analyzers should be complete with a calibration system. The calibration system should be delivered along-with respective span gas cylinder and permeation tubes. The span gas concentration should be within 60 90% of the first measuring range. The analyzer must have a zero point internal calibration system and in agreement with the minimum detection limit of each analyzer. The calibration procedures are to be integrated into the software system for automatic calibration & remote calibration.
- b) CALIBRATION GAS CYLINDER: The supplier has to supply the calibration gas cylinder (highly polished aluminium 10 liters water capacity), along with SS Regulator, traceable to NIST for each component (NH3, Benzene & Toluene) along with SS regulator for the multi point calibration. The synthetic air and N2 cylinder (99.99% purity with certificate) should be in a Carbon Steel cylinder of 47 Liters water capacity along with SS Regulator.
- c) The analyzers shall be supplied with all ancillaries necessary for operation with a pump (preferably in built) and any other items such as charcoal scrubber, Teflon air sample intake filter, drier, Teflon tubing suitable for connection to air sampling manifold. All such items are to be itemized. Dust filter in all the analyzers should be provided before the solenoid valve to protect against frequent chocking of solenoid valve.

- d) The connector systems for out-going signal for recording and the computer terminal should be on the back panel with screw type connecting pins.
- e) integrated in the rack cabinet, fully calibrated & tested before supply and ready for a start up at the respective sites. Analyzer must exhibit performance equal to or better than values specified in the Calibration & test certificate provided with each analyzer.
- f) The manufacturer shall specify the cross sensitivity of measurement for all the analyzers
- g) Each set of analyzers shall be supplied with two copies of elaborate operation manuals comprising details as below:
 - Parts (I): should comprise installation, operational and troubleshooting details;
 - Parts (II): should have details about preventive, routine and corrective maintenance;
 - Parts(III): should comprise details of all electrical, electronic and pneumatic circuit diagrams, details of each spare parts, catalogue No. etc. and details of each electronic card / PCB's
 - Parts (IV): Schematic diagram for possible repair & maintenance.
 - Parts (V): Standard Operating Procedure(SOP) for each analyzer.
 - Parts (VI): List of equipment and other accessories along with contact details of supplier.
- h) Digital Output: Multi drop RS 232 port shared between gas Analyzers, VOC Analyzer, Meteorological Sensors and computer for data, status and control. Communication should have a USB port, TCP/IP Ethernet connection
- i) Quality Control and Standard

Data shall be collected and validated according to US EPA standards, using the methodologies included in the 40 Code of Federal Regulations. All analyzers shall have current US EPA reference or equivalent method designation and shall be of the latest design.

The supplier shall submit a Standard Operating Procedure for the air quality monitoring stations to the Buyer at the time of bid submission. This Standard Operating Procedure shall be approved by the Buyer prior to award. The Standard Operating Procedure shall contain the following:

- j) Operating procedures for all analyzers and meteorological sensors
 - Calibration procedures
 - Calibration schedule
 - Maintenance procedures
 - Maintenance schedule
 - Data validation procedures
 - Quality Assurance procedures
 - Sample quality assurance documentation

- k) The calibration procedures for analyzers shall conform to US EPA methodologies and shall include daily calibration checks, by weekly precision checks and linearity checks every six weeks. All analyzers shall undergo full calibration in every three months. Data obtained from these calibration checks and copies of associated Quality Assurance and calibration documentation, shall be submitted to the Buyer along with the Air Quality Data.
- I) Air Quality Data shall be submitted to the Buyer on Real Time basis through an automated system and on a monthly basis in the form of an Air Quality Report. This report shall include tabular and graphic information on gas and dust concentrations as well as meteorological data for each site. The data shall be reported in the form of 15 minute averages and shall also include daily, weekly and monthly averages, minimum, maximum, standard deviations, total data captured and percent data capture. It should also have a stat validation mechanism and a delayed data check mechanism. The Air Quality Report shall also include wind roses where wind speed and direction are measured.

m) Sampling System

A suitable sampling system as specified by USEPA having 10 ports manifold and is fitted with a suction pump to draw ambient air. System duly equipped with moisture removal systems should be provided for sampling of ambient air separately for gaseous and dust measurement

n) Gases Sampling System

Height of the sampling system: Approx.1.0meterabovetheroof

Roof entry cutout:

Conduit:

Inner sampling system:

Stainless Steel

Borosilicate glass
Sampling head:

Stainless Steel

Manifold: 10 port for tubes 6x1mm,self-tightening.

Sample air flow sensor

Uni-directional sample air flow measuring device should be installed at the sampling system to measure the flow of ambient air through the sampling system. The output of the signal should be connected to computer to ascertain the continuous flow of sample from ambient air. The suction pump operational status should also be

connected to the computer as a separate channel

o) 19" Network Rack

Suitable 19" Rack cabinet to accommodate all analyzers, calibrators, Zero air generators, data logger etc. The dimension of the rack without doors, with aluminum section and rear of 2 mm steel sheet, one removable roof plate, fitted with 4 filling eyebolts. Four roof fixing screws are included in the package to replace the lifting eyebolts. One gland plate three part, one pair of 475 mm (19") mounting angles depth adjustable in 25 mm pitch pattern fitted on two fixing angles approximately 150 mm

unit from the front standard. To accommodate panel width of 19" size: width = 600 mm, Height = 1400 mm and Depth = 800 mm. The 19" racks should be screwed to the floor of the station with anti-vibration pads. All nuts and bolts shall be cadmium coated.

6.2.3. Component A: GAS ANALYSERS

| S.No. | Parameter | Details |
|-------|---|--|
| 1 | Working Principle | GC-FID,ECD & UV spectroscopy. Automatic Gas Chromatograph with programmable gradient of the oven temperature Automatic Gas Chromatograph with programmable gradient of the oven temperature |
| 2 | Detectors | Flame Ionisation Detection, Electrochemical Wet Cell detection, UV Spectroscopy. |
| 3 | Detector Life cycle | 10 Years |
| 4 | Detection range | VOC odour 0.05 to 45 µg/m3 or 10 ppt to 15 ppb for Trimethylbenzene and Benzene Sulphur odour components :0 to 100 ppb NH3:0-100 ppm |
| 5 | Detection Limit | VOC odour: 10 ppt or lower for Tri-methylbenzene and Benzene Sulphur odour components: DES and DMS < 150 ppt (0.15 ppb), DMDS, MM and EM < 50 ppt (0.05 ppb), H2S and SO2 option < 5 ppb NH3 ≤ 0.2 ppm |
| 6 | Cycle Times | 60 Minutes OR Lower |
| 7 | Relative Standard Deviation on Concentration over 24 hrs | RSD < 3% over 48 Hr (Concentration) |
| 8 | Injection Loop Volume | 10 μl to 1 ml |
| 9 | Injection valve | 6 ports |
| 10 | Relative Standard Deviation on Retention Time over 24 hrs | RSD < 0.5% Over 48 Hr (Retention Time) |
| 12 | Gas Supply | H2 (carrier gas): 30ml/min N2 (carrier gas): 4ml/min Zero Air with 3-4 bar pressure |
| 13 | Carrier gas | H2 generator / Cylinder N 5.0 purity |
| 14 | Zero Air | N2 generator / Cylinder 47L Capacity with 99.999 % purity |
| 15 | Sample extraction | analyser sampling pump |

| 16 | Control system | Complete computer control for 1. Gas generators 2. Flushing system 3. Sampling 4. Injection 5. Complete control of GC 6. Online and offline analysis of chromatograms 7. Automatic and manual setting of chromatogram analysis parameters 8. Real sampling time, sampling amount, customized calculation of concentration values 9. Customized report format with standard and custom fed parameters |
|----|----------------------------|--|
| 7 | Additional Features | a) FID & ECD filament security with pressure measurement displayed on online GC software with automatic filament off in case of no pressure. b) Embedded computer Windows based should include an online gas chromatography software allowing display for full chromatogram and reprocess functions. c) Results transferred by MODBUS RTU / TCPIP in standard. d) Automatic calibration function from external cylinder with dedicated cylinder inlet. e) The GC must be build with packed column which can be changed by the user for maintenance without changing the complete GC module. f) Full remote control of the GC using remote software like Team viewer or equivalent. g) GC must use a rotor valve more robust over time in front of particulate from the sample. |
| 18 | Data output | Through Modbus Protocol |
| 19 | Data Management | Controlled by the inbuilt Embedded PC with software in the Analyser |
| 20 | Calibration | By built-in permeation tubes/ certified External Cylinder. Certified External Calibration gas cylinder mixture of known standards for automatic validation of results at different concentration levels. |
| 21 | Dimensions | Rack: 19" (5U) • Height: 222 mm • Width: 482 mm • Depth: 660 mm |
| 22 | Power Supply | 230V / 50Hz |
| 23 | Standards & Certifications | ISO 19739:2004, DIN 51855/7, ASTM D 7493-14, MCERTS EN 14662-3, EN 15267-1, EN 15267-2. |

6.2.4. METEOROLOGICAL SYSTEM

Range

The meteorological instrumentation should be interfaced directly with the Data Acquisition System after passing through a lightning protection isolation box. A crank- up telescopic 10 meters tower should be erected for mounting of meteorological sensors. The relative humidity and solar radiation sensors should be mounted on the tower. The specifications are as follows:

| Dange (On exetion) | O COm/o or hottor |
|---------------------|--|
| Range(Operation) | 0–60m/s or better |
| Sustainability | Upto75m/sec |
| Accuracy | ±0.5m/sec or better |
| Resolution | 0.1m/sec |
| Sensor Type | Ultrasonic |
| Threshold | 0.5m/sec or less |
| Response time | 10 sec or better |
| Wind Direction | la ana i |
| Range | 0–359 degree |
| Accuracy | ±3 degree or better |
| Resolution | 1degree |
| Sensor type | Ultrasonic |
| Threshold | 0.5m/sec or less |
| Response time | 10 sec or better |
| Ambient Temperature | |
| Range | -10 degrees C to 60 degrees C |
| Accuracy | ±0.2 Degrees C or better (with radiation shield) |
| Response | 10 seconds in still air |
| Resolution | 0.1°C |
| Sensor type | Resistance type |
| Response time | 10 sec or better |
| Relative Humidity | |
| Range | 0 to 100% RH |
| Accuracy | ±3.0% or better |
| Resolution | 1% |
| Sensor type | Capacitive/Solid State |
| Response Time | 10 sec or better |
| Solar Radiation | |
| Range | 0 to 1500W/m2 or better |
| Accuracy | ±5.0%orbetter |
| Resolution | 5W/m2 |
| Sensor type | Silicon Photo diode |
| Rainfall | |

0.2mmto100mm/hr

| Accuracy | ±5%orbetter |
|---------------|--|
| Resolution | 0.2mm |
| Sensor type | Tipping bucket rain gauge or any other suitable sensor |
| Response Time | 10 sec or better |

g) Telescopic Crank-up Metrology Tower

The wind speed, wind direction, temperature, relative humidity and solar radiation sensors are to be mounted on the Meteorological Tower. The tower is to be a free standing four section telescopic tower provided with a hand crank to raise and lower the instruments mounted on the tower. Specifications are as follows

| Extended Height | 10 meters |
|-----------------------|-------------------------------|
| Retracted Height | 2metres |
| Wind load Limit | 0.7896sq.m.(8.5sq.ft)at50mph |
| Number of Sections | 4 |
| Construction material | Galvanised steel or aluminium |

Note:

Humidity and temperature sensors are to be supplied with weather and thermal radiation shield made of anodized aluminium and sensor should be supplied with all necessary cables, connector and mounting arrangements as required.

The entire meteorological sensor should be certified/ traceable to World Meteorological Organization (WMO) and software should also have certification from the appropriate international agency

6.2.5. DATA ACQUISITION SYSTEM

a) TYPICAL ARCITECTURE

- i. This architecture defines data transmission from all connected Stations to State Data Center and Central Data Centre in parallel through internet (leased lines) in real time basis.
- ii. Each Stations measure their respective pollutant and meteorological parameters and get them stored in data logger before transmission.
- iii. From Data logger, data transmits for data display, and also through internet the same data is transmitted to Central server as well as State server for data display at Central level and State level, parallelly.
- iv. Data display system at all locations display Pollutant, Meteorological and NAQI data on real time basis of all connected Stations
- v. The typical architecture is depicted in the schematic below

6.2.6. DATA ACQUISITION AND HANDLING SYSTEM AT EACH STATION

- i. Type I: System comprises of data logger having DAS and station computer. Or
- ii. Type 2: System comprises of station computer with DAS facilities.
- iii. Data logger/DAS with 8 analog, 24 digital inputs. Ability to log channels at different intervals and should have capability of averaging and displaying real time data and averaged data over a period of 1 min, 15 min, ½ hr, 1 hr, 4 hrs, 8 hrs, 24 hrs, 1 month and year. Communication between data logger and station computer should be using standard USB/RS232/RS485/ Ethernet Connector. The data logger should have internal battery with charger and if it is PC based UPS serves the purpose.
- iv. The data logger/DAS should support LAN and Internal GSM modem/ Wi-Fi for data transfer to central server. Station computer for data logging will be in addition to workstation computer required for calculating AQI, and will be of same or better specifications that of work station computer.
- v. The supplier is supposed to install Computer System alongwith DAS of suitable high- end specification as per the design & specifications of DAHS. Real Time Data to be simultaneously transmitted from station computer to Central Servers at respective SPCB and CPCB.
- vi. PC / workstation to be supplied which is compatible to DAHS system being supplied

A. PC/WORKSTATION FOR AQI

This has to be installed at station for the preparation of AQI along with the station computer. The same would be controlled through remote mechanism with CPCB for the purpose of installation & maintenance of AQI Software. The supplier will maintain the Computer System (Hardware, OS, etc.)

| Sr.No | Specifications | |
|-------|------------------|--|
| 1 | CPU | Intel®Corei78thgenerationorhigher |
| 2 | Memory | 8GBDDR-IV,orbetter |
| 3 | Ethernet ports | Integratedintel®EthernetLAN10/100/1000 |
| 4 | PCI Slots | Two PCIe x 16 half height |
| 5 | Optical Drive | DVD R/W Internal |
| 6 | HDD's | 3.5"1TB,SATAdrives |
| 7 | Power Supply | Standard suitable power supply |
| 8 | Keyboard | Optical Keyboard same as OEM |
| 9 | Mouse | Standard Optical Mouse same as OEM |
| 10 | I/O ports | Minimum6USB(atleast4portsof3.0) |
| 11 | Monitor | 22"WideorhigherLEDFHDColorMonitor |
| 12 | Wireless adapter | USB Wireless adapter x 1 no. |

| 13 | OS support | Open source Linux Cent OS |
|----|------------|--|
| 14 | Warranty | Warranty onsite OEM warranty–comprehensive |
| 15 | Туре | Desktop (Flat)/Tower |

B. MANAGEABLE ETHERNET SWITCH (RACK MOUNT)

A manageable switch with following minimum configuration has to be supplied for each station 24 x Fast / Giga Ethernet ports At least 4 PoE ports

C. REMOTE MONITORING TOOL / SOFTWARE

Remote calibration & validation management software and its licenses for the entire project duration for stations computer and central servers located at SPCBs and CPCB.

Data Acquisition Software (DAS) & it's licenses to be provided for Central Servers at each SPCB and CPCB.

The remote connectivity tool/software like TeamViewer with License, procurement, installation & updataion for the complete duration for each SPCB & CPCB, is to be done by the supplier

D. 19" 21U NETWORK RACK

A rack with following specifications should be supplied at each of the stations

| Sr. | Specifications | QTY/si | ite | |
|-----|---|--------|-----|--|
| 1 | 19"IndustrialRack,21U, Color Black Consisting of:- | | | |
| 2 | Steel Enclosure, 9 Folded profile of dimensions 800 mm width * 1000 mm Depth * 42 U height, supporting 1000 Kgs load. Bottom cover with knock out holes for cable entry to be provided. Three pairs of horizontal support shall be fitted on both right and left sides. | | | |
| | Foldable Front & Rear Door to its half size while opening, shall be of 100% perforated. Provision for mounting fans on Rear door with concealed AC wiring. | | | |
| 4 | Fan230V,90CFMtobemountedonRear Door. | 4 | | |
| 5 | ACMainChannelverticaltwonos.,12x5/15Amps Socket-AQMP Make: Anchor with 32 Amps MCB make : Northwest or better | 2 | | |
| 6 | Horizontal Cable Manager | 20 | | |
| 7 | Vertical Cable Manager | 10 | | |
| 8 | Copper based Electrical Earthing Strip. Provision of or Fifteen (15) points. | 1 Set | | |
| 9 | Each set of: a)Castor with Brake2 Nos. | 1 | Set | |

| | b)Adjustable screw legs4Nos. OR c)Baseframe-1 No. | |
|----|--|---|
| 10 | Light provision activation in the rack up on opening of the front/rear door. | 1 |
| 11 | H/WPacketof20SRT-AQMP. | 2 |

E. WIRELESS ACCESS POINT (For all stations and CPCB)

| 1 Deployment Indoor 2 Mounting Ceiling/Wall 3 Antenna Type Internal 4 Number of Radios 5 Frequency Band 2.4GHz,5.0GHz,2.4GHz & 5.0GHz 6 Supported Wi-fi Standards 802.11a/b/g/n/ac 7 Wireless Speed Upto(Mbps) 800 8 Max Wireless Signal Range in Mts 20 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-FSK,WPA-TKIP,802.11,EAP-TLS, WPA-FSK,WPA-TKIP, WPA-PSK,WPA-TKIP, WPA-TKIP, WPA-PSK,WPA-TKIP, WPA-TKIP, WPA-PSK,WPA-TKIP, WPA-PSK,WPA-TKIP, WPA-TKIP, WPA-PSK,WPA-TKIP, WPA-TKIP, WPA-T | S. | Type of Access Point | Standalone |
|--|-----|---|---|
| Mounting | No. | | |
| Antenna Type Internal Number of Radios Dual Frequency Band 2.4GHz,5.0GHz,2.4GHz & 5.0GHz Supported Wi-fi Standards 802.11a/b/g/n/ac Wireless Speed Upto(Mbps) 800 Max Wireless Signal Range in Mts 20 Channel Width(MHz) 80 Maximum Data Rate MBps 800 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP, WPA-PSK,WPA | | | |
| 4 Number of Radios 5 Frequency Band 2.4GHz,5.0GHz,2.4GHz & 5.0GHz 6 Supported Wi-fi Standards 802.11a/b/g/n/ac 800 8 Max Wireless Signal Range in Mts 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 8 WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11;EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11;EAP-TLS., WPAAES 12 Receiver Sensitivity in db 99 13 Transmit power (tx)(dBm) 14 Radio Resource Management such for powerl-Available channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for QoS for Voiceover Wireless Available 19 Support for MU-MIMO Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 | | <u> </u> | - |
| 5 Frequency Band 2.4GHz,5.0GHz,2.4GHz & 5.0GHz 6 Supported Wi-fi Standards 802.11a/b/g/n/ac 7 Wireless Speed Upto(Mbps) 800 8 Max Wireless Signal Range in Mts 20 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TLS,WPA-TKIP,802.11,EAP-TKIP,802.11,EA | | • • | Internal |
| 6 Supported Wi-fi Standards 802.11a/b/g/n/ac 7 Wireless Speed Upto(Mbps) 800 8 Max Wireless Signal Range in Mts 20 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2-PSK, WPA-TKIP, WPA2-PSK, WPA-TKIP, WPA2-PSK, WPA-TKIP, 802.11,EAP-TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for power Available channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 | | | |
| 7 Wireless Speed Upto(Mbps) 800 8 Max Wireless Signal Range in Mts 20 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for power Available channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 19 Support for MU-MIMO Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of MIMO Supported& Spatial stream 2 x 2:2 23 Number of WLAN(SSID) per AP 16 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support | | | 2.4GHz,5.0GHz,2.4GHz & 5.0GHz |
| 8 Max Wireless Signal Range in Mts 9 Channel Width(MHz) 10 Maximum Data Rate MBps 11 Supported Encryption 12 Receiver Sensitivity in db 13 Transmit power (tx)(dBm) 14 Radio Resource Management such for power Available channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2- Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for Mounding Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 26 mGig support 300 WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., PPA2 AVAIIABLE AES,802.11i,EAP-TLS., PPA2 AVAIIABLE AES,802.11i,EAP-TLS., WPA2 AES,802.11i,EAP-TLS., PPA2 AVAIIABLE AVAIIABLE AES,802.11 AES,802.11 AES,802.11 AES,802.11 AES,802.11 AES,802.11 AES,802.11 AES,802. | | • • | |
| 9 Channel Width(MHz) 80 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for powerAvailable channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support | | 1 (1) | |
| 10 Maximum Data Rate MBps 800 11 Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPAAES 12 Receiver Sensitivity in db 99 13 Transmit power (tx)(dBm) 3 Radio Resource Management such for powerAvailable channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 16 17 Moscillable 18 Support for Autonomous access- point option Available 29 Support for Autonomous access- point option Available 29 Numberof10/100/1000 port 10 Maximum Clients Nos 100 20 Support for Autonomous access- point option Available 21 Numberof10/100/1000 port 10 Maximum Clients Nos 100 22 Maximum Clients Nos 100 23 Maximum Clients Nos 100 24 Support for Autonomous access- point option Available 15 Maximum Clients Nos 16 Maximum Clients Nos 17 Mesh Nevariable 18 Numberof10/100/1000 port 18 Maximum Clients Nos 18 Maximum Clients Nos 19 Maximum Clients Nos 100 21 Numberof10/100/1000 port 22 Maximum Clients Nos 23 Maximum Clients Nos 24 Maximum Clients Nos 25 Maximum Clients Nos 26 Maximum Clients Nos 27 Maximum Clients Nos 28 Maximum Clients Nos 38 Maximum Clients Nos 39 Maximum Clients Nos 30 Maximum Client | | | |
| Supported Encryption WEP, WPA-PSK, WPA-TKIP, WPA2 AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS,WPAAES 12 Receiver Sensitivity in db | 9 | Channel Width(MHz) | 80 |
| AES,802.11i,EAP-TLS., WEP,WPA-PSK,WPA-TKIP,802.11,EAP-TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for powerAvailable channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 | 10 | Maximum Data Rate MBps | 800 |
| PSK,WPA-TKIP,802.11,EAP- TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for powerAvailable channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support | 11 | Supported Encryption | WEP, WPA-PSK, WPA-TKIP, WPA2 |
| TLS, WPAAES 12 Receiver Sensitivity in db -99 13 Transmit power (tx)(dBm) 3 14 Radio Resource Management such for power channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 Available | | | |
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| Radio Resource Management such for power Available channel, coverage hole detection and performance optimization Support for Load Balancing between2-Available 4Ghzand5Ghz Support for Configurable Carrier Threshold Available Device Management Web-based Configuration Interface (GUI) Support for Mesh Networking Available Support for QoS for Voiceover Wireless Available Support for MU-MIMO Available Number of MIMO supported& Spatial stream 2 x 2:2 Number of WLAN(SSID) per AP Maximum clients Nos 100 Support for Autonomous access- point option Available Numberof10/100/1000 port 1 Modern Available | | Receiver Sensitivity in db | -99 |
| channel, coverage hole detection and performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support | 13 | | |
| performance optimization 15 Support for Load Balancing between2-Available 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support | 14 | Radio Resource Management such for power | Available |
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| 4Ghzand5Ghz 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 26 mGig support Available | | | |
| 16 Support for Configurable Carrier Threshold Available 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 23 Maximum clients Nos 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 26 mGig support 27 Available | 15 | Support for Load Balancing between2- | Available |
| 17 Device Management Web-based Configuration Interface (GUI) 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support Available | | 4Ghzand5Ghz | |
| 18 Support for Mesh Networking Available 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support Available | 16 | Support for Configurable Carrier Threshold | Available |
| 19 Support for QoS for Voiceover Wireless Available 20 Support for MU-MIMO Available 21 Number of MIMO supported& Spatial stream 2 x 2:2 22 Number of WLAN(SSID) per AP 16 23 Maximum clients Nos 100 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support Available | 17 | Device Management | Web-based Configuration Interface (GUI) |
| Support for MU-MIMO Available Number of MIMO supported& Spatial stream 2 x 2:2 Number of WLAN(SSID) per AP 16 Maximum clients Nos 100 Support for Autonomous access- point option Available Numberof10/100/1000 port 1 mGig support Available | 18 | Support for Mesh Networking | Available |
| Number of MIMO supported& Spatial stream 2 x 2:2 Number of WLAN(SSID) per AP Maximum clients Nos Support for Autonomous access- point option Numberof10/100/1000 port mGig support Number of MIMO supported& Spatial stream 2 x 2:2 Available | 19 | Support for QoS for Voiceover Wireless | Available |
| Number of WLAN(SSID) per AP Maximum clients Nos Support for Autonomous access- point option Available Number of 10/100/1000 port mGig support Available | 20 | Support for MU-MIMO | Available |
| Number of WLAN(SSID) per AP Maximum clients Nos Support for Autonomous access- point option Available Number of 10/100/1000 port mGig support Available | 21 | Number of MIMO supported& Spatial stream | 2 x 2:2 |
| 24 Support for Autonomous access- point option Available 25 Numberof10/100/1000 port 1 26 mGig support Available | 22 | Number of WLAN(SSID) per AP | 16 |
| 25 Numberof10/100/1000 port 1 26 mGig support Available | 23 | Maximum clients Nos | 100 |
| 26 mGig support Available | 24 | Support for Autonomous access- point option | Available |
| 26 mGig support Available | | | 1 |
| 9 11 | | - | Available |
| | 27 | | Available |

| | Support for QoS and Video Call Admission | Available |
|----|--|---------------|
| | Control capabilities | |
| 29 | Support for Rogue access point detection | Available |
| 30 | WPC certified | Yes |
| 31 | Wi-Fi CERTIFIED | Yes |
| 32 | Powering options(Such asAC/DC, 802/3af | 802.3af PoE |
| | PoE, 802/3at PoE+), specify | |
| 33 | Power POE (Watt) | 11 |
| 34 | Environmental Standard: plenum- rated | Yes |
| | (UL2043)for Indoor and IP67 for Outdoor | |
| 35 | Operating Temperature Range (Degree C) | 0-40 |
| 36 | Operating Humidity (%RH) | 95 |
| 37 | Dimension (mm * mm * mm) | 13.8*13.5*3.3 |
| 38 | On Site OEM Warranty (Years) | 5 Years |

F. UNIFIED THREAT MANAGEMENT DEVICE (UTM) - Required at MPCB HO

- a) Appliance should be EAL 4+ Certification and ICSA Certification for Firewall
- i. Appliance Throughput
 - Firewall through put of more than 5Gbps.
 - Minimum1.2Gbps of Antivirus throughput
 - Minimum1 million Concurrent sessions
 - Minimum1 Gbps of IPS throughput
- Minimum 45,000 New Sessions/second
- Minimum 800Mbps of IPsec VPN throughput
- Minimumof1000 IPsec tunnel support and 50 SSL VPN user support. License for the same should be included in the BOM.
- 8 x 10/100/1000interfacessupportingHardwareBypass

ii. General features

- Should be appliance based and rack mountable
- Identity based Firewall
- Intrusion Prevention System
- Gateway Anti-virus
- Gateway Anti-spam
- Web Content & Application Filtering
- Bandwidth Management
- Inbuilt-on Appliance Reporting
- Network: OSPF, Round Robin load balance, RIPv2, BGP, equal &unequal cost load balance, High Availability, QOS, etc. Round Robin Balance, Server Load Balancing.
- Support for user authentication over SMS.
- Country Based Blocking, FQDN support and should support MIX mode deployment
- 4 Eye Authentication feature for data integrity

iii. GATEWAY ANTIVIRUS, ANTI SPYWARE, ANTISPAM

The proposed integrated Anti-Virus/Ant-Spyware should have Web coast Checkmark Certification as part of a UTM. Virus, Worm, Trojan Detection and Removal, Automatic Virus signature database update, Real-Time blacklist, MIME header check, Redirect spam mails to dedicated email address, image-spam filter, Spam Notification, Zero hour Virus outbreak protection. Recurrent pattern Detection Technology for AS. Self Service Quarantine area

iv. WEB AND APPLICATION FILTERING

The proposed Content Filtering should have at least one Certification as part of a UTM viz. Web coast Checkmark. URL, Keyword, File type block, Block Java applets, cookies, ActiveX, Block malware, phishing, farming URL, block P2P application, anonymous proxies, Customized block on group basis. System should have Minimum of 70+ categories with more than 100 million URLS supported with more than 5000 application support

v. SECURITY FEATURES

- Intrusion Prevention System (IPS): The proposed IPS should have Certification as part of a UTM viz. Web coast Checkmark. For different attacks like Mail Attack, FTP Attack, HTTP Attack, DNS Attack, ICPM Attack, TCP/IP Attack, DOS and DDOS Attack, TelNet Attack. Signatures: Default (more than 2000+), Custom, IPS Policies: Multiple, Custom, User-based policy creation, Automatic real-time updates from CR Protect networks, Protocol Anomaly Detection
- VPN: IPsec, L2TP, PPTP and SSL as a part of Basic Appliance, VPN redundancy, Hub and Spoke support, 3DES, DES, AES, MD5,SHA1 Hash algorithms, IPsec NAT Transversal, VPNC Certified
- Load Balancing: For Automated Failover/Failback, Multi-WAN failover, WRR based Load Balancing. High availability: Active-Active. QOS, OSPF, RIPv2, BGP, Policy routing based on Application and User support Round Robin Load Balancing
- Bandwidth management: Application and user identity based bandwidth management, Multi WAN bandwidth reporting, Guaranteed and Burstable bandwidth policy. Bandwidth for User, Group, Firewall Rule, URL and Applications
- Monitoring and Reporting System: Should Include reports for Centralized management, Monitoring & Logging, Command line interface. Monitoring Gateways, Monitoring suspicious activity and alerts, Graphical real-time and historical monitoring, email notification of reports, viruses and attacks reports. IPS, Web filter, Antivirus, Anti-spam system reports. IP and User basis report, >40+ Compliance reports and >1000+ drilled down reports on the appliance with 250+ GB of storage
- License for UTM Appliance: FIVE (5) Years (post warranty) for Gate Way Antivirus, spyware, Anti-Spam, content and application filtering. IPS, reporting and support License period will be counted after activation

G. PRINTER SPECIFICATIONS

- i. Colour Laserjet Multifunction printer (1 Unit for each station) having following specifications
- ii. Print speed black: 25ppm min
- iii. Print Speed Color: 5ppm min
- iv. Scanner
- v. Resolution: 1200x1200dpi
- vi. Processor speed 1200 MHz Printorbetter
- vii. Paper handling input, standard 250-sheet input tray or better
- viii. Duplex printing Automatic (standard)
- ix. MediasizessupportedA4A5
- x. Wireless connectivity and automatic two-sided printing
- xi. Automatically connect to wireless network,
- xii. Print from anywhere in office with Ethernet and wireless connectivity
- xiii. Connect via USB, and access tools from PC to manage printer.
- xiv. 1,500-page per toner cartridge or better

H. CONNECTIVITY FOR DATA TRANSFER

- a) LEASED LINE CIRCUIT: 1Mbps capacity leased line connectivity with 99% uptime service level agreement (SLA) to be provided by the Supplier at each station location. The leased line may be provided on copper or optical fiber or through RF depending upon the location. 04 nos. of Real IPs to be obtained alongwith the Lease Line Circuit. Router equipped with 01 WAN Port and minimum 08 LAN Ports is to be procured alongwith the Leased Line Circuit.
- b) BROADBAND: 1Mbps capacity broadband connectivity from other than one already providing leased line connectivity shall be provided by the firm at each station.
- c) GSM /Hotspot Connectivity: Internet connectivity will have to be provided by the firm for the entire project duration at LED location either using GSM or Hotspot connectivity

I. DATA ACQUISITION SOFTWARE FOR STATION

- a) The software captures data from all channels in the system and stores in the station Computer.
- b) Data Acquisition
 - i. Frequency of data acquisition: User selectable 1, 5, 30, 60, 120 second averaging duration online digitally.
- ii. Minimum frequency will be subject to capability of analyzer cycle.
- iii. Channel size :32Channels or more supported Expandable to 64channels,if required in future
- iv. Data input: Either Analog (0-1 volt/0-10 volt/2-20mA/4-20mA) or Digital to configure with the PC. The condition is that system should remotely operable
- v. User configurable channels, stations and equipment with communication parameters.

- vi. Analyzer data channel should comprise of Name, Units, Communication Address, Validity Range, Operation and Error Status.
- vii. Provision to incorporate conversion factors such as PPB to µg/m3etc.
- viii. Software should be equipped to configure the analyzers with it, irrespective of company make and communication protocol of the analyzer and the output mode i.e. Analog or Digital (RS 232) of the instrument.
- ix. The output should be provided in user defined units

c) Data Collection

- i. Average data over user selectable time (1,5,30,60 seconds time interval) period.
- ii. Operational status, Error status, calibration status and calibration values observed from the analyzer should be captured and should be made available along with the data with a frequency of maximum five minutes.
- iii. System should collect of the diagnostics of the instrument comprising actual diagnostics parameters and their values at least once in every five minute to check the state of the health analyzer.

d) Calibration parameters

- i. Provision to entering zero calibration, span calibration values of gas cylinder/permeation to devices
- ii. Provision for collecting zero calibration, span calibration values(pre calibration & post calibration) in to the database for further analysis.
- iii. Provisions to collect electronic system pre calibration & post calibration values from the analyser to ascertain the percentage deviation/ correction applied during each calibration and record it in database at station & Central computer.

e) Data Storage

- i. Data along-with diagnostic, calibration, alarms should be stored at station computer at a defined path.
- ii. Interval of data dumping will be same as defined in the data collection.
- iii. System should be capable to keep every second acquired data from 32 channels for a period of minimum five years.
- iv. Current data should be stored as per ISO-7168-1:1999I format and should be available in folder named as c:\Data\ at an interval of 15 minutes. As an example c:\data\01.05.2015.xml. the file will be appending without double data entry and as per ISO format.
- v. Data should also be stored for last two years in E:\data\Year\Month\day i.e. e:\data\2015\05\01.05.2015.xml
- vi. If data encryption is done, then decryption procedure should be made available in soft file format to check the data at station at any point of time. To convert data on continuous basis for exporting to AQI software, procedure should be available without any licensing. AQI calculating Software will be provided by CPCB/SPCB

- f) Data Display (Statistical Analysis of Data)
- i. Main window for real time display of all measured parameters with status of all analyzers/ sensors.
- ii. In 4-in-4 graphs and4-in-1 graph formats
- iii. In tables of 4-in-1 format
- iv. Real time multi graphs over user selectable time period i.e. 6.00 AM to 6.00 AM etc.
 - g) Display of graphic & tabular display of the current data.
- i. Graphical form should comprise of 4-4 graphs, 4-1 graphs in user defined format (1, 5, 10, 15, 30 min, 1hour, 4, 8, 24 hour, 30 days and yearly; user definable time series)
- ii. Tabular form should comprise of 4 channel list in user defined format (1, 5, 10, 15, 30 min, 1hour, 4, 8, 24 hour, 30 days and yearly; user definable time series)
- iii. Station instruments basic configuration etc. should be visible on screen continuously
 - h) Statistical analysis tools like regression analysis, co-relation analysis and other analysis as per industry standards in the field of environment should be available and if not the firm should develop these for CPCB within a time frame of six months.
 - i) The system should have procedures for normal analysis tools like calculation of data with respect to a threshold value, average, minimum, maximum, calculation of violating value with respect defined values(National Air Quality Standards) for defined period for the database etc.
 - j) Data analysis of diagnostics parameters
- i. Data analysis of Pre calibration and post calibration data (if facility not available, should be developed within six months)
- ii. Data analysis of corrections applied of each calibration cycle (if facility not available should be developed within six months)

k) DATA BACKUP

- i. There should be defined data backup procedure through which data can be extracted from station computer in simple text format/excel/ ISO format(user definable).
- ii. There should be defined restore procedure also to restore the data in case of data loss.
- iii. A display screen should be available to update the user about data availability

DATA VALIDATION AUTOMATIC CHECKS AT STATION SOFTWARE

- i. Zero level and span level checks if performed cyclically and defined results are not obtained up to +/- 5%(user definable 0-10%) then system should alarm the user of system failure and the recorded alarm should be transmitted to central software.
- ii. After instruments perform the calibration the results obtained should be recorded and should be transmitted to central computer.
- iii. There should be provision of two databases one is raw database and another corrected

database.

iv. Validation of data through calibration database Pre calibration & post calibration values collected

m) CALIBRATION OF SYSTEMS

- i. Calibration window for analyzer for the calibration from computer.
- ii. Remote Access to Calibration: Calibration exercise need to be done remotely. All necessary arrangements for it should be made in the system.
- iii. Calibration data file may be prepared separately and data should be excluded from the database
- iv. Calibration database need to be formed, stored and transmitted to central server.
- v. Calibration cycles to be as per the models of the instruments.
- vi. Calibration records should store the calibration values displayed by instrument.
- vii. Diagnostics during calibration should also be recorded

n) RECORDING OF LOCATION OF STATION

- i. Fixed and Mobile Stations location to be recorded and North correction feature should be available.
- ii. Latitude and longitude of stations be recorded

o) DATA TRANSFER TO CENTRAL

- i. All data captured at Station Computer should be transferred to Central Software
- ii. User selectable time frame for transmission of data to central server.
- iii. Diagnostics (actual diagnostics parameter values recorded each time in the station), configurations(station channel configurations), alarms(generated alarms) should be transmitted

p) DATA TRANSFER TO CENTRAL

Software should have provisions to connect data output including current pollutants concentration, AQI, advertisement, etc. to the display boards (LEDs), to be installed at public site. For the purpose Data display device has been recommended in the document.

6.2.7. DATA ACQUISITION SOFTWARE AT THE CENTRALSTATION AT MPCB & CPCB

a) SOFTWARE AT CENTRAL STATION

- i. Software should not have any restriction on number of locations and computers either technologically or in terms of licensing.
- ii. Should display multiple stations on line data (momentary values) in tabular text and graphic format.
- iii. Data should be received by the central from all locations maximally within 5minutes duration or at user defined time intervals.

- iv. Data along-with diagnostics and calibration details should be transmitted at central from all connected locations.
- v. Should support dial up systems, broadband connectivity, wireless connectivity, 2G or 3G or any new technology which shall be in place during project time should be compatible and if not, need to developed by the system provider up- to project duration without additional charges.
- vi. Should have the remote control facilities for calibrations (Zero & Span) of instruments and measuring range modifications.
- vii. Should have facility for displaying data communication error reports, image management which should be recorded and should be available for display

b) DATA DISPLAY AT CENTRAL STATION

- i. In terms of 4-in-1 table format
- ii. Real time multi graphs over user selectable time period i.e. 6.00 AM to 6.00 AM etc.
- iii. Display of graphic & tabular display of the current data like simple 3D line and column chart, polar diagnostics and 3D perspective column chart.
- iv. Graphical form should comprise of 4-4 graphs, 4-1 graphs in user defined format i.e. 1, 5, 10, 15, 30 min, 1hour, 4, 8, 24 hour, 30 days and yearly. (user definable time series)
- v. Tabular form should comprise of 4 channel list in user defined format i.e. 1, 5, 10, 15, 30 min, 1hour, 4, 8, 24 hour, 30 days and yearly. (user definable time series)
- vi. Display of data using selectable name of different stations.
- vii. Generation of Wind Roses, Pollution Roses (minimum 12 directional)with user defined time limits.
- viii. Calculate vector mean of wind direction.
- ix. Programmable downloading of data.
- x. Comparison of data w.r.t. Standards in Graphical form and tabular form with information of values exceeds the Standards.
- xi. Specific data zooming facility
- xii. Database correction procedure
- xiii. Separate user ID and Password for correction of database so that all regional level users, if authorized, can validate their regions data and the events be recorded along with ID, date & time, on monthly basis.
- xiv. Data validation trail recording

c) DATA EXPORT

- i. Data export in ISO 7168 format is required to be done automatically.
- ii. Possibility to export the data files in Excel, Text and other formats Tabular form should be in user defined format i.e. 1, 5, 10, 15, 30 min, 1 hour, 4, 8, 24hour,30daysand yearly

d) DATA IMPORT

In case of communication medium fails there should a mechanism to shift the data into Pen drive (Physical medium for data collection) physically and a procedure to import the same on central software

e) PRINTING

Possibility to connect different types of printers and auto printing facility for all displays generated throughout the analysis of data at any point of time

- f) DELAYED DATA CHECKS & VALIDATION OF DATA AT CENTRAL SOFTWARE AT MPCB
- i. After instruments perform the calibration the results obtained should be recorded and should be transmitted to central computer and stored.
- ii. Zero level and span level checks if performed cyclically and defined results are not obtained up to +/- 5% (user definable 0-10%) then system should generate alarm to the user for system failure and the recorded alarm should be transmitted to central software and stored. There should be provisions to read these alarms in a database for corrective actions and for comparison of data for acceptability or rejection.
- iii. Software utility should be provided through which validation of data could be done at SPCB and the validated data files be synced with database at CPCB.
- iv. The utility should provide date wise access to the data available in the station computer in the editable form along with provision to record events/remarks and should store in the database in the station computer as "Validated Data". However, the raw data should remain intact.
- v. Validated files should also be stored in the stations computer in a folder at C:\Data\stationName\Datevalid.txt Ex:C:\Data\NehruNagar\21062019valid.txt).
- vi. This file format should be same as csv file format as mentioned below;
 - File Name: sanathnagar 1,2,3,4,5,6,7,8,
 - Station name, Parameter, Date from, Date to, Value, calibration flag, maint flag, remark,
 - Sanathnagar, CO, 27-04-201513:00, 27-04-201513:15, 0.2497, 0,0, analyser faulty,
 - Sanathnagar, C0, 27-04-201513:15, 27-04-201513:30, 0.2470, 0, 0, analyser faulty,
 - Sanathnagar, C0,27-04-201513:30,27-04-201513:45,0.2470,0,0,analyserfaulty,
 - Sanathnagar, C0,27-04-201513:45,27-04-201514:00,0.2470,0,0, analyserfaulty.
 - Sanathnagar, Ozone, 27-04-201513:00, 27-04-201513:15, 59.6710, 0, 0, flow problem,
 - Sanathnagar, Ozone, 27-04-201513:15, 27-04-201513:30, 59.5960, 0, 0, analyserfaulty,
 - Sanathnagar, Ozone, 27-04-201513:30, 27-04-201513:45, 59.5960, 0, 0, analyserfaulty,
 - Sanathnagar, Ozone, 27-04-201513:45, 27-04-201514:00, 59.5960, 0, 0, analyser faulty,
 - Sanathnagar, N0,27-04-201513:00,27-04-201513:15,0.5922,0,0,analyserfaulty,
 - Sanathnagar, N0,27-04-201513:15,27-04-201513:30,0.4435,0,0,0,
 - Sanathnagar, N0,27-04-201513:30,27-04-201513:45,0.4435,0,0,0,
 - Sanathnagar, N0,27-04-201513:45,27-04-201514:00,0.4435,0,0,0,
 - Sanathnagar, So2, 27-04-201513:00, 27-04-201513:15, 3.5233, 0,0,0,
 - Sanathnagar, So2, 27-04-201513:15, 27-04-201513:30, 3.7278, 0,0,0,
 - Sanathnagar, So2, 27-04-201513:30, 27-04-201513:45, 3.5233, 0,0,0,

- Sanathnagar, So2,27-04-201513:45,27-04-201514:00,3.7278,0,0,0,
- Sanathnagar, RT, 27-04-201513:15, 27-04-201513:30, 33.2260, 0, 0, 0,
- Sanathnagar, RT, 27-04-201513:30, 27-04-201513:45, 33.2240, 0, 0, 0,
- Sanathnagar, AT, 27-04-201513:45, 27-04-201514:00, 33.0960, 0.0.0.
- Sanathnagar, AT, 27-04-201514:15, 27-04-201514:30, 33.3740, 0, 0, 0,
- Sanathnagar, RH, 27-04-201513:15, 27-04-201513:30, 41.3080, 0, 0, 0,
- Sanathnagar, PM10, 27-04-201513:15, 27-04-201513:30, 30.3000, 0, 1, analyser faulty,
- Sanathnagar, PM10,27-04-201513:30,27-04-201513:45,30.3000,1,0,analyserfaulty,

Please note:

Here 0-zero stands for normal operation of instruments in calibration flag status 1-Stands for calibration mode ON and data will not be considered for averaging purpose. Same is true for Maintenance mode where 0-normal and 1 maintenance mode ON

a) DATA DISPLAY AT LOCATIONS AT THE SITE IDENTIFIED BY MPCB

At Station:

- A display board will have to be supplied & installed by the supplier at each Station or nearby to it (may be few kilometers) for which space to be provided by MPCB
- ii. Size 8 feet X 12 feet
- iii. CPCB/ MPCB intend to show the content:
- iv. Information from External Sources
- v. Information drawn from Internal databases
- vi. Advertisement in the form of Text, Slides, Charts, Videos etc.
- vii. Live Feeds

b) DISPLAY BOARD DATA TRANSMISSION DEVICE

| S.N | Item Description | Specifications | | | |
|-----|------------------------------|---|--|--|--|
| 1. | PROCESSOR | Intel®Corei5equivalentOrBetter | | | |
| 2. | Memory | 6GB,Memory slots for Micro SD or full size SD card slot with Memory | | | |
| | | support for at-least 8 GB | | | |
| 3. | Ports | One HDMI | | | |
| | | LAN Portf or Ethernet Network Connection | | | |
| | | Minimumof3USBPortwithsupportforUSB | | | |
| | | 2.0orUSB 3.0. | | | |
| 4. | OS Support | Linux, or Windows OS | | | |
| 5. | Communication Options | LAN Communication | | | |
| | | Wi-Fi Communication— Wi-Fi Hot spot enabled/ GPRS Comm. | | | |
| | | Enabled | | | |
| 6. | Power Supply | 5to12VDCthrough220V50HzACSupplyadapter or USB driven. | | | |
| 7. | Size | MechanicalChassisSizenottoexceed10"x6"x6" with stand alone | | | |
| | | tower/box. | | | |
| 8. | Operating Environment | Operating Temperature 0°Cto+50°C Humidity upto 90% | | | |
| 9. | Device Support | 05 Years | | | |

| 10. | Antivirus | It should be secured. If Windows, than licensed anti- virus should be | | |
|-----|--------------------|---|--|--|
| | | there during the project duration. | | |
| 11. | General | Supplier will configure and deploy the communication mechanism. | | |
| | | Complete manual of the device should be provided. | | |
| 12 | Accessories | 01 Meter HDMI Cable | | |
| 13. | Internet | To be provided by the vendor either through GSM SIM or through | | |
| | | Wi-Fi Enabled Dongles. | | |
| 14. | Display Board shou | ldLast data saved. | | |
| | show | | | |
| 15. | Display board shou | ldLast updated time should be displayed | | |
| | show | | | |
| 16 | Software | The vendor is responsible to provide software which can download | | |
| | | the data from Station computer, AQI, | | |
| | | Advertisements etc. store it and display on the Display Board | | |
| | | seamlessly. | | |

c) Content Management System:

- i. Content Management for Data Display Boards is to be managed both locally & Centrally. Hence, the supplier is requested to provide software for local (at stations) & Central content management (at CPCB &MPCB). The central software should be capable to operate simultaneously at MPCB and CPCB. There could be two different software at MPCB & CPCB to manage contents of display boards of Station & MPCB Office.
- ii. Therefore, Display Board Data Transmission Device (DBDTD) should be capable to collect the content from local station, SPCB Central Software and CPCB Central Software manually through scheduling procedure for different durations (Minutes, Hours, Days, Weeks, Months, Years etc.), zone-wise, state-wise, group-wise, device- wise, content-wise separately as there will be of different contents to be displayed at different locations.
- iii. The central software should have the capability of Remote machine status monitoring & management. It should be capable to provide on-screen display of remote display board (live screen of display board).
- iv. Establishing the required connectivity by using necessary devices (either through LAN, Wi-Fi, GSM etc.) between the DBDTD and CPCB & SPCB to run the content seamlessly is within the scope of the supplier.
- v. Remote Procedures (if not available, facility should be developed by Supplier)
- vi. Central software should have capability to allow connecting any station computer through remote.
- vii. Central software administrator should be able to go for remote calibration of any of the systems.
- viii. Software should be capable to operate remote stations configurations.
- ix. Control panel window should be available for controlling each analyzer that means each analyser should be controllable separately through remote software being provided with the software system.
- x. Alarm window for valid alarms of all analyzers and sensors.
- xi. It should have transparent data—connection to each analyzer from remote.
- xii. System should be capable to remotely configure all stations through remote location using

configuration file to maintain the uniformity. The configuration command from central at SPCB location should be active.

d) Data Report Generation

- i. To prepare reports hourly, weekly, monthly, yearly in user defined interval and formats.
- ii. Mean, Median, Percentile, Maximum, Standard deviation, Frequency analysis and Maximum Frequency analysis.
- iii. Data Comparison Software should be able to compare any of the four channels irrespective of type of data in the system with respect to each other on a single time scale user selectable
- iv. Data Comparison on different time scale
- v. Software should be able to compare data on the basis of different time scales like one station (x) parameter (y) of one given date is compared with other station (z) parameter (y) on any other date in a single graph.
- vi. Data reports, calibration reports and status reports with user time periods.
- vii. Historic multi-curves/ graphs over user selectable time period.
- viii. Report generation over user selectable time period (instantaneous or averaged over a period of 1, 15, 30 min, 1 hr, 4, 8, 12, 16 and 24 hrs etc.).
- ix. Diurnal variation, standard deviation, regression and other statistical parameter reporting possibilities with various available mathematical methods.
- x. If required separate report generation procedures have to be developed for which firm will be responsible for project duration.
- xi. Daily report from each station should be generated and sent through email for hourly data of each parameter (including meteorological parameters, diagnostics of instruments and calibration of instruments if performed during that day) automatically format for which can be mutually agreed upon.
- xii. Data should be downloadable in Excel Sheet, CSV format through user selection.
- xiii. Provision should be there to use raw as well as validated data for generation of all types of graphics including wind roses and pollution roses

e) Security

- i. Software should be totally secured with protection against virus, malware etc.
- ii. Security device like firewall for VPN Tunneling should be installed
 - f) Protocol for Data Transmission from Station
- i. Presently CPCB is operating NAQI network which uses this protocol mentioned below for the data collection at central server to generate NAQI which is made available to the public. The Instrument Supplier will have to generate the data output immediately after installing the station at any location in this format so that station gets integrated into the existing system immediately.
- ii. However, the proposed procedure given in this document of data management through ISO 7168 format would be applied after proper system checks and setup. In parallel both systems will be operated for nearly six months and finally, ISO based system will be

adopted for future data management from station in the entire country

g) Data Format

- Data file on real time basis having 15 minutes average values in a prescribed format attached at Annexure-I should be generated at the station for which Instrument Supplier is responsible.
- ii. Fileshouldbeupdatedafterevery15minutes.
- iii. Data intervals like 00:15, 00:30, 00:45, 01:00 should be fixed at the station.
- iv. Station file name should be exactly as the name of the station to be displayed on the web portal. i.e. Sanathnagar, Nehru Nagar. Here precaution is to be taken that no space between words should be given or no special characters should be used.
- v. File should be recorded in a folder c:\data\sanathnagardata.txt
- vi. File should allow data appending sequentially.
- vii. Date of last file record appended in the file should be recorded and data afterwards be placed in the data file.
- viii. Fileappendingshouldcontinuesubjecttomax97lines.FirstinFirstout mechanism shall be followed in keeping file size to 97 lines.
- ix. Hence, in the specified folder c:\Data\therewillbeasinglefile
- x. Which will keep appending as per format attached.
- xi. Duplicate entry of any data should not be made in the file.
- xii. System should have capability to create previous record data file for which user will give the date. This is required to have lost data makeup in the final database, if any.

h) Data Mapping

- i. Protocol for each parameter is fixed as follows
- ii. 15 Minutes average value will be provided by the operator of the station
- iii. Each SPCB will have parameter as mentioned in table only. Not even a small gap or space is provided other than mentioned table is acceptable
- iv. Standard Parameter Naming Protocol and Conversion Factors Table

| Parameter's Name | Parameter Abbreviations | Unit | Conversion factors At 25°C |
|---------------------|----------------------------|--------|-------------------------------|
| Rack Temperature | Temp | °C | |
| Wind Speed | WS | m/s | |
| Wind Direction | WD | Deg | |
| Ambient Temperature | AT | °C | |
| Relative Humidity | RH | % | |
| Barometric Pressure | BP | mmHg | |
| Solar Radiation | SR | W/mt2 | |
| Rain Fall | RF | Mm | |
| Vertical Wind Speed | VWS | Degree | |
| Benzene | Benzene | μg /m3 | 1ppb=3.19 µg/m3 |
| Toluene | Toluene | μg /m3 | 1ppb=3.77µg/m3 |

| Xylene | Xylene | µg /m3 | 1ppb=4.34 μg/m3 |
|---------------|-------------|--------|-----------------|
| Ethyl Benzene | Eth-Benzene | | 1ppb=4.34 μg/m3 |
| M+P_Xylene | MP-Xylene | | 1ppb=4.34 µg/m3 |
| Methane | CH4 | µg /m3 | 1ppb=0.65 μg/m3 |
| Ammonia | NH3 | µg /m3 | 1ppb=0.70 μg/m3 |
| Formaldehyde | HCHO | µg /m3 | 1ppb=1.23 μg/m3 |

Note: Any other parameter can be added with prior approval of MPCB

- i) Other Technical Conditions
- i. Compatible Hardware required for data transmission through Data Display Connection Device has to be installed.
- ii. Should support the latest formats of Windows 32 bit or 64 bit. Any new patches developed or upgraded software during project duration should be provided without additional cost.
- iii. Manual of complete system should be provided.
- iv. Firm should provide the hardware required for data acquisition along with all the software's required like OS, Networking software, Remote functionality software and should maintain hardware and software for project duration.
- v. All software like OS, Data Acquisition Software, Remote Calibration Software, Content Management Software etc. used for the entire project, should be either open source or with license. Copy of licenses should be provided to MPCB/CPCB

Annexures

| Document No. Description | |
|--------------------------|------------------------------------|
| Annexure 1 | Documents for Eligibility Criteria |
| Annexure 2 | Documents for Financial Proposal |
| Annexure 3 | Other Documents/Formats |

7. Eligibility Criteria Documents

7.1. Guidelines for Pre-Qualification Bid

A. Pre-Qualification Cover Letter

(To be submitted on the letterhead of the bidder)

Place: Date:

To Member Secretary Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022

Subject: Submission of Pre-Qualification proposal in response to the Request for Proposal (RFP) for Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract.

Tender Reference No: ST/

Dear Sir.

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for "Request for Proposal (RFP) for Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract.".

We attach hereto our responses to Pre-Qualification proposal required by the RFP. We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to MPCB, is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the MPCB in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be

dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and agree to abide by this tender response for a period of 180 days from the date of submission of Bid and ready to extend the validity of the bid for further period as informed by MPCB. We hereby declare that in case the contract is awarded to us, we shall submit the security deposit in the form prescribed the RFP.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products / services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Signature of Authorized Signatory (with official seal)

Name:

Designation:

Address:

Telephone & Fax:

E-mail address:

Mandatory Enclosure:

- 1. Format to share Bidder's and Bidding Firm's Particulars (Section 5.3)
- 2. Check list for the documents to be included in the Pre-Qualification with appropriate page numbers.
- 3. Format of Project Citation

B. Checklist for documents to be included in the Pre-Qualification Envelope

(Bidder should refer pre-qualification criteria mentioned in this RFP)

| # | Basic | Eligibility Criteria | Documents to be submitted Documents Page | |
|-----|--------------|---|--|--|
| | Requirement | | submitted no. | |
| | | | (Y/N) | |
| PQ1 | Legal Entity | legal entity registered in India and in operations for a period of at least last 5 (five) years as on last | a) General Information of Bidder along with Bidder's constituting documents such as MOA, AOA. b) Copy of Certificate of Incorporation/ Registration/ Partnership deed of Bidder/ LLP deed c) Copy of PAN Card d) Copy of GST Registration e) Copy of Power of Attorney format in RFP Annexure 1: document 6 | |
| PQ2 | Turnover | The average annual turnover of the bidder for the last three (03) audited financial years should be more than INR Cr. 4.5Cr. (F.Y 2020-21, FY 2021-22, FY 2022-23) | a) Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/Chartered Accountant and b) Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the | |

| # | Basic Requirement | Eligibility Criteria | Do | ocuments to be submitted | Documents submitted (Y/N) | Page no. |
|-----|-----------------------|--|----|--|---------------------------------|-------------|
| | | | | format (Annexure 1 : document 7) | | |
| PQ3 | Net worth | Bidder shall have Positive Net Worth in each of the last Three (03) Financial Years. (F.Y 2020-21, FY 2021-22, FY 2022-23) | | Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/Chartered Accountant and Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the format (Annexure 1 : document 7) | | |
| PQ4 | Project Experience | a. Project Experience 1 The Bidder must have experience in Supply of Handy VoC Samplers during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 3.7 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 2.5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 2 Cr. b. Project Experience 2 – The Bidder must have experience in setting up | | Bidders shall submit copy of work order/ contract agreement mentioning the relevant scope of Work. Completion Certificate from the client OR In case of on-going project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, having received the payment matching the 'Minimum Project Value' of the | | |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted | Documents submitted (Y/N) | Page no. |
|-----|---|---|--|---------------------------------|-------------|
| | | Continuous Online VOC Monitoring Station during last seven (07) years as on last date of submission of bid as per following details: - | partially completed project. c) Project Citation as per format specified in Section 7 (D) | | |
| | | One (01) project with "Similar works" costing at least INR. 8 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 4 Cr. | | | |
| PQ5 | Certification | The Bidder of OEM should have valid ISO 9001: 2015/ ISO/ IEC 17000: 2020/ ISO 14000 certification | Copy of valid Certificate as of the date of bid submission. | | |
| PQ6 | Manufacturer's Authorization Form | The Bidder/OEM of the bidder should be a Manufacturer or Authorized Dealer / Distributor of the Manufacturer / OEM. | For Manufacturer: Self Declaration along with the compliance Form For Authorized Dealers / Distributor: Manufacturer's Authorization Form (MAF) from Manufacturer / OEM / Authorized Distributor Annexure 1 – Document 8 | | |
| PQ7 | Technical Compliance | The Equipment being proposed MUST be 100% compliant to the Minimum | Declaration by the respective Manufacturer /OEM on their letterhead | | |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted | Documents submitted (Y/N) | Page no. |
|-----|--------------------------|---|--|---------------------------|-------------|
| | | Technical Specifications / Requirement and the Bidder should be authorized by the OEM | giving 100% compliance to the specifications asked in the RFP and Authorization for the Bidder, duly signed and stamped, in the format given Annexure 1 – Document 9 | | |
| PQ8 | Office in Maharashtra | The bidder shall have office in Maharashtra or shall open office in Maharashtra within 15 days from date of issuance of LOA/LOI | Copy of existing office address proof like 7/12 (satbara)/ lease | | |
| PQ9 | Blacklisting | The Bidder should not be blacklisted by any Central Government/ State Government / Union Territory (UT) / Urban Local Body (ULB)/ PSU in India for Unsatisfactory past performance, corrupt & fraudulent practices or any other unethical conduct | A self-certified letter signed by the Authorized Signatory of the Bidder as per Annexure 1: document 12. | | |

| # | Basic Requirement | Eligibility Criteria | Documents to be submitted | Documents submitted (Y/N) | Page no. |
|---|----------------------|--|---------------------------|---------------------------|-------------|
| | | either indefinitely or for a particular period of time as on last date of submission of bid. | | | |

C. Format to share Bidder's and Bidding Firms Particulars

Bidders Profile

The Table below provides the format in which general information about the bidder must be furnished.

| Sr. | Description | |
|-----|---|----------------------------|
| No | | Details/Information |
| 1 | Name of the firm | |
| 2 | Address | |
| 3 | Email | |
| 4 | Contact number/s (Tel / Mobile) | |
| 5 | Office address of Maharashtra | |
| 6 | Presence in how many towns in Maharashtra/India. (Provide Address) | |
| 7 | Year of establishment | |
| 8 | No. of completed years for practicing in India as on bid submission date | |
| 9 | Name/s of partners (Membership certificates issued by authorized body should be enclosed) | |
| 10 | Name of Office In charge of Mumbai | |
| 11 | CA Employees proposed to be assigned for the services and his / their profiles | |
| 12 | Name, address and account number of the firm's banker(s) | |
| 13 | PAN of the firm | |
| 14 | GST registration number of the firm | |
| 15 | Number of Employees | |
| 16 | Number of C.A. Employees in the firm (out of above) | |
| 17 | Average Turnover during last three financial years (FY 20-21, FY 21-22, FY 22-23) | |
| 20 | Details of major assignments | |
| 21 | Any other information considered relevant. | |

Please submit the relevant proofs for all the details mentioned above along with your Bid response

Authorized Signatory

D. Format for Project Citation (Pre-Qualification)

Details of past assignments / experience

| • | | ŀ | Handling | Work related to |
|-------|-------------|------|----------|-----------------|
| Sr.No | Client Name | From | То | |
| | | | | |

| Sr. No. | Item | Details | Attachment Pg. no. |
|---------|---------------------------------|---------|-----------------------|
| 1 | Name of The Project | | |
| 2 | Date of Work Order | | |
| 3 | Client Details with Address and | | |
| 3 | Contact Numbers | | |
| 4 | Scope of Work | | |
| 5 | Contract Value | | |
| 6 | Completion Date | | |

Note: The Bidder is required to use above formats for all the projects referenced by the bidder for the pre- qualification criteria.

7.2. Guidelines for Technical Proposal

A. Technical Proposal Bid Cover Letter

(To be submitted on the Letterhead of the responding firm)

Date: dd/mm/yyyy

To

Member Secretary
Maharashtra Pollution Control Board,
Kalpataru Point, 3rd floor,
Opp. PVR Cinema, Sion Circle, Sion,
Mumbai-400 022

Sub: Request for Proposal (RFP) for Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract

Ref: RFP Notification number:

Dear Sir,

Having examined the RFP, the receipt of which is hereby duly acknowledged, we, the undersigned, offer to provide the professional services as required and outlined in the RFP for "Request for Proposal (RFP) for Selection of Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract."

We attach hereto the technical response as required by the RFP, which constitutes our proposal. We undertake, if our proposal is accepted, to adhere to the implementation plan (Project schedule) for providing Professional Services in "Request for Proposal (RFP) for Selection of Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract." put forward in RFP or such adjusted plan as may subsequently be mutually agreed between us and MPCB or its appointed representatives.

If our proposal is accepted, we will obtain a Performance Security Deposit (Bank Guarantee) issued by a nationalized bank in India, as mentioned in the Contract, 10% of contract value.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of 180 days from the date of submission of Bid and it shall remain binding upon us with full force and virtue, until within this period a formal contract is prepared and executed, this tender response, together with your written acceptance thereof in your notification of award, shall constitute a binding contract between us and MPCB.

We confirm that the information contained in this proposal or any part thereof, including its exhibits, schedules, and other documents and instruments delivered or to be delivered to MPCB is true, accurate, and complete. This proposal includes all information necessary to ensure that the statements therein do not in whole or in part mislead MPCB as to any material fact.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm/ organization and empowered to sign this document as well as such other documents, which may be required in this connection.

| Date: | | | | |
|-----------------|--------------------|----------------------|------------------------|-----------------|
| (Signature) | | | | |
| (Name) | | | | |
| (In | the | | capacity | of |
| [Seal | / | Stamp | of | bidder |
| Witness | | | | Signature |
| Witness | | | | Name |
| Witness Addre | SS: | | | |
| CERTIFICATE | AS TO AUTHO | RISED SIGNATORIE | ES | |
| I | | , the Company | Secretary of | |
| certify that | | | | ne above Bid is |
| authorized to d | lo so and bind the | e Company by autho | rity of its board/ gov | erning body. |
| Date: | | | | |
| Signature: | | | | |
| (Company Sea | ıl) (Name) | | | |

B. Format to Project Citation

(To be submitted on the Letterhead of the responding company)

i. List of Projects

| S No | Name of Project | Client Name | Page Nos (From-To) |
|---------|-----------------|-------------|-----------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |

ii. Individual Project Citation Format

| Sr. No. | Item | Details |
|------------|---|---|
| Genera | I Information | |
| 1. | Customer Name | |
| 2. | Name of the Contact person and details for the client of the assignment | |
| Project | Details | |
| 3. | Project Title | |
| 4. | No. of equipment supplied | |
| 5. | Start Date | |
| 6. | End Date | |
| 7. | Duration of the project (In Months) | |
| 8. | Current Status (Work In progress, Completed) | |
| 9. | Number of staff deployed on the assignment | |
| 10. | Work Order | Document/ Attachment Ref. Number along with page number |
| 11. | Copy of Agreement | Document/ Attachment Ref. Number along with page number |

| Sr. No. | Item | Details | | | | |
|------------|---|---|--|--|--|--|
| 12. | Satisfaction Certificate/Completion Certificate | Document/ Attachment Ref. Number along with page number | | | | |
| Size of | the Project | | | | | |
| 13. | Contract value of the project (in INR. Crores) | | | | | |
| 14. | Contract Start Date – End Date | | | | | |
| 15. | Scheduled Milestone | | | | | |
| 16. | Monetary Penalty/ Blacklisted/ Penalized Amount | | | | | |
| Narrativ | ve description of project de | escribing the scope of work | | | | |
| | | | | | | |
| Progres | ss of the project (Description | on) | | | | |
| | | | | | | |
| Payme | nt Received till Date | | | | | |
| | | | | | | |

Note: The Bidder is required to use above formats for all the projects referenced by the bidder for the technical bid evaluation.

C. Checklist for documents to be included in the Technical Proposal Envelope

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|--------------|--|---|---------------|---|---------------------------|-------------|
| TE 1. TE 1.1 | audited financial years | Average Annual Turnover (in INR) (Cr) 1) < 4.5 Cr.: Disqualified 2) > = 4.5 Cr and < 7.0 Cr : 10 marks 3) >=7.0 Cr and < 9.0Cr : 12 marks 4) >=9 Cr[DS16]: 15 marks | 15 | a) Audited Financial Statements (Balance Sheet and Profit & Loss Statements) from the Statutory Auditor/ Chartered Accountant and b) Certificate duly signed by Statutory Auditor of the Bidder for total turnover as per the format Annexure 1: document 7 | | |
| TE 2. | Bidder's Relevant Stren | gth (65 Marks) | | | | |
| TE 2.1 | Bidders' Experience The Bidder must have experience in "similar works" during last seven (07) years as on last date of submission of bid as per following details: - a. Project Experience 1 | Experience A Project value of maximum any three projects submitted 1) >=INR 3.7 Cr and < INR 5.4 Cr: 05 Marks | 20 | a) Bidders shall submit copy of work order/contract agreement mentioning the relevant | | |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|-------------|--|---|---------------|---|---------------------------------|-------------|
| | The Bidder must have experience in Supply of Handy VoC Samplers during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 3.7 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 2.5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 2 Cr. b. Project Experience 2 – The Bidder must have experience in setting up Continuous Online VOC Monitoring Station during last seven (07) years as on last date of submission of bid as per following details: - One (01) project with "Similar works" costing at least INR. 8 Cr. OR Two (02) projects with "Similar works" each costing at least INR. 5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 5 Cr. OR Three (03) projects with "Similar works" each costing at least INR. 4 Cr. | 2) >=INR 5.4 Cr and < INR 7.1 Cr: 8.0 marks 3) >=INR 7.1 Cr.: 10 marks[DS17] Experience B Project value of maximum any three projects submitted 1) >=INR 8.0 Cr and < INR 12 Cr: 05 Marks 2) >=INR 12 Cr and < INR 16 Cr: 8.0 marks 3) >=INR 16 Cr.: 10 marks[DS18] | | scope of Work. b) Completion Certificate from the client OR In case of ongoing project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, having received the payment matching the 'Minimum Project Value' of the partially completed project. c) Project Citation as per format specified in Section 7: 7.2 (B) | | |
| T.E. 2.3 | The Bidder should have experience of implementation of | , | 10 | a) Bidders shall submit copy of work order/ | | |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|------------|--|--|---------------|---|---------------------------------|-------------|
| | "similar works" Project across at least 01 locations with separate demarcated physical boundaries in single work in last 5 financial years as on last date of bid submission date. | 2. >=2 Projects:10 | | contract agreement mentioning the relevant scope of Work. b) Completion Certificate from the client As per format specified in Section 7: 7.2 (B) | | |
| T.E. 2.4 | Completed orders for Operation and Maintenance of Online VOC monitoring Stations for at least One (01) Years in India and within last 5 (five) years as on last date of submission of bid. | orders: (max 15 marks) 1. >=1 and < 2 Projects: 10 marks | 15 | a) Bidders shall submit copy of work order/contract agreement mentioning the relevant scope of Work. b) Completion Certificate from the client In case of ongoing project, a Go-Live Certificate along with partial completion certificate from the client on client's letter head mentioning the relevant scope of Work, | | |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|------------|--|--|---------------|--|---------------------------------|-------------|
| | | | | having received the payment matching the 'Minimum Project Value' of the partially completed project. OR c) Project Citation as per format specified in Section 7: 7.2 (B) | | |
| TE 2.5 | Support capability | | | | | |
| 2.5 A | Service Engineers | Number of Service Engineers / Staff: 1) Service staff ≥ 10 but <15: 3 marks 2) Service staff ≥ 20: 5 marks | 5 | a) Attested copy of the Employee Provident Fund registration letter / certificate | | |
| 2.5 B | The bidder must have at least 30 manpower on its payroll in India as on last date of submission of bid. | on payroll: | 5 | a) Attested copy of the Employee Provident Fund registration letter / certificate | | |
| TE 2.6 | Certifications The Bidder/OEM of the bidder should have the following valid certification a) ISO 9001: 2015 | The Bidder shall have valid as on last date of bid submission. i. Only ISO 9001:2015 – 05 marks | 10 | a) Copy of valid certifications as on bid submission date | | |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|------------|---|--|---------------|---|---------------------------------|-------------|
| | certification b) ISO/ IEC 17000: 2020 c) ISO 14000 | ii. ISO 9001:2015 and any one of the remaining two certifications - 8 marks iii. All three certifications - 10 marks | | | | |
| | Presentation (20 marks) | | | | | |
| TE 3.1 | Presentation on Implementation Methodology, Support and Operation and Maintenance Services proposed | below categories: | 20 | Presentation delivered by the bidder should depict Bidder's understanding of the business / functional requirements of the MPCB, the proposed solution and implementation approach. | | |

| Sr. No. | Criteria | Evaluation Parameters | Max. Marks | Supporting Documents | Documents submitted (Y/N) | Page no. |
|------------|----------|---|---------------|-------------------------|---------------------------|-------------|
| | | Mitigation, report management, Alerts & notification, Tools) (04 marks) 5. Bidder's strategy to manage Continuous Online VOC Monitoring stations at various locations and Comprehensive O&M. (04 marks) | | | | |
| | | Total | 100 | | | |

Annexure -1: Documents for Eligibility Criteria

| Document No. | Description | Submitted (Yes/No) | Pg No. |
|-----------------|---|-----------------------|--------|
| Document 1 | Format for Bid Submission Covering Letter | , | |
| Document 2 | ment 2 Format for Bidder Details | | |
| Document 3 | Certificate of Incorporation / Partnership Deed | | |
| Document 4 | Copy of PAN Card | | |
| Document 5 | Copy of GST Certificate with GST Number | | |
| Document 6 | Power of Attorney in the name of Signatory | | |
| Document 7 | Format for CA Letter about Profitability | | |
| Document 8 | Self Declaration for Manufacturer / MAF from Manufacturer / OEM / Authorised Distributor of Manufacturer | | |
| Document 9 | Manufacturer's Authorisation Letter (for Authorised Dealers – format Attached) / Self Declaration (For Manufacturers), Confirmation of 100% compliance to Minimum Technical Specifications (on Manufacturer's Letterhead, Format given) | | |
| Document 10 | Format to Project Citation | | |
| Document 11 | Format for Undertaking for Office in Maharashtra | | |
| Document 12 | Format for Non-Blacklisting | | |
| Document 13 | Format for Declaration from HR department of the Bidder | | |
| Document 14 | Format for Non-Disclosure Agreement | | |
| Document 15 | Copy of Online Tender Fee payment receipt | | |
| Document 16 | Copy of Online EMD Payment acknowledgement from Maharashtra eTender portal | | |
| Document 17 | Documents as testimonials as per requirements in Section 3.25 | | |
| Document 18 | Technical Proposal comprising of Company profile, Capabilities, Strengths Proposed Delivery / Execution methodology | | |

^{*} Bidders are to consider this document as a Checklist and Index. The same should be included as a part of Technical Bid

Format for Bid Submission Covering Letter (Document – 1)

(To be submitted on the letterhead of the bidder)

{Place, Date}
To,

Member Secretary

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022

Subject: Bid Submission Cover Letter for-

RFP Reference No: MPCB/

Dear Sir,

We, the undersigned bidders, having read and examined in detail all the bidding documents for <<Name of the RFP>>, do hereby propose to provide our services as specified in the RFP.

We attach hereto our responses to the requirements and commercial proposals as required by the RFP. We confirm that the information contained in these responses or any part thereof, including the exhibits, and other documents and instruments delivered or to be delivered to MPCB, Govt. of Maharashtra is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead the department in its short listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the selection process, we are liable to be dismissed from the selection process or termination of the contract during the project, if selected to do so.

We agree for unconditional acceptance of all the terms and conditions set out in the RFP document and also agree to abide by this tender response for a period of bid validity as defined in this RFP. We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed the RFP. We also herewith express our willingness to subject to MPCB's conditionality regarding manpower recruitments (required for the project), change of hands of management and declaring upfront the source of funding for the project.

We agree that you are not bound to accept any tender response you may receive. We also agree that you reserve the right in absolute sense to reject all or any of the products/ services specified in the tender response.

| • | powered to sign this documen | t on behalf of our company/ corporation/ firm/ it as well as such other documents, which may |
|-----------------------------------|------------------------------|---|
| Dated this | Day of | 202 |
| Thanking you, Yours faithfully | | |

(Signature of the Authorized Signatory of the Bidder) (In the capacity of)

(Name)

Duly authorized to sign the Tender Response for and on behalf of:

(Name and Address of Company) Seal/Stamp of bidder

Format for Bidder Details (Document - 2)

<< To be printed on Bidder's Company's Letter Head, Signed by Authorized Signatory >>

TO WHOMSOEVER IT MAY CONCERN

Bidder Information (Sole Bidder)

| S | Sr. | Particulars | Information |
|------|-------|---|-------------|
| 1 | | Name of the Bidder | |
| 2 | | Address of the Bidder | |
| 3 | | Telephone Nos. | |
| 4 | | E-mail | |
| 5 | | Website (If available) | |
| 6 | | Year of Establishment | |
| 7 | | Date of registration | |
| 8 | | ROC Reference No. | |
| | | (with supporting document) | |
| 9. | | PAN No:(with supporting | |
| | | document) | |
| 10 |). | GST Number (with supporting | |
| | | document) | |
| 11 | ۱. | Proposed Equipment Details | |
| | | (Make, Model and Quantities) | |
| Thar | nking | you, | |
| (Nan | ne ai | nd Designation of the Authorized signatory of t | he Bidder) |

Name:

Seal: Date: Place:

Designation:

Business Address:

Format for Power of Attorney (Document – 6)

| Know by all men by these presents, We (Name of the |
|--|
| Bidder and address of their registered office) do hereby constitute, appoint and authorize |
| Mr. / Ms (name and residential address of Power of |
| attorney holder) who is presently employed with us and holding the position of |
| as our Attorney, to do in our name and on our behalf, all |
| such acts, deeds and things necessary in connection with or incidental to our Proposal for |
| the "Request for Proposal (RFP) for Selection of Agency to (i) Supply Handy VOC |
| Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, |
| and provide various related services including comprehensive O & M Contract."" |
| including signing and submission of all documents and providing information / responses |
| to the MPCB, representing us in all matters before MPCB, and generally dealing with the |
| MPCB in all matters in connection with our Proposal for the said Project. |
| |
| We hereby agree to ratify all acts, deeds and things lawfully done by our said Attorney |
| pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid |
| Attorney shall and shall always be deemed to have been done by us. |
| For |
| Name: |
| Designation: |
| Date: |
| Time: |
| Seal: |
| Business Address: |
| |
| Accepted, |
| (Signature) |
| (Name, Title and Address of the Attorney) |
| |
| |

Note:

- a) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.
- b) The Power of Attorney shall be provided on Rs.100/- stamp paper.

c) The Power of Attorney should be supported by a duly authorized resolution of the Board of Directors of the Bidder authorizing the person who is issuing this power of attorney on behalf of the Bidder.

Format for Turnover details and Networth (Document – 7)

(To be submitted on Letterhead of Statutory Auditor of respective Bidders) {Place, Date} To,

Member Secretary

Dear Sir,

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, **Sion Circle, Sion, Mumbai-400 022**

| Subie | ct: Bid | Submission | Cover | Letter for- |
|-------|---------|-------------------|-------|-------------|
| | , | | | |

RFP Reference No: MPCB/

| M | | 414 | | h | | 41 | | financial |
|----------------------------------|---------|------|----|-------|----------|--------|------------|------------|
| We,, 0 | cerury | เทลเ | we | nave | verilled | ιne | reievant | Tinanciai |
| statements and other records of | | | | (Name | e of Com | pany |), having | its Indian |
| registered office at | | | | | Th | e fina | ancials fo | r the past |
| three years have been summarized | d below | ٧: | | | | | | |

Financial Declaration of Bidder

| Description | Financial Year | | | |
|----------------------------------|----------------|---------|---------|--|
| (All Currency in INR and Crores) | 2020-21 | 2021-22 | 2022-23 | |
| Annual Turnover | | | | |
| Net Worth | | | | |
| Current Assets | | | | |
| Current Liabilities | | | | |
| Total Revenues | | | | |
| Profit Before Taxes | | | | |

| Profit After Taxes | | |
|---------------------|--|--|
| Average Annual | | |
| Turnover =(A+B+C)/3 | | |

The Average Annual Turnover for(Name of the Company) is INR <Insert Value> (Rupees <Insert Value in Words> and the(Name of the Company) has Positive Net Worth during the last 3 (three) Financial Years. (F.Y 20-21, F.Y. 21-22, F.Y. 22-23)

It is further certified that based on our review of financial statements together with the book of accounts, records and documents for the aforesaid financial years, the above-mentioned figures are true and correct to the best of our knowledge and as per information and explanations provided to our satisfaction by the(Name of the Company).

Signature of Authorized Signatory (with official seal)

Name:

Designation:

Address:

Telephone & Fax:

E-mail address:

Notes:

- 1. Numbers available in currency other than Indian Currency have been converted using the Reserve Bank of India exchange rate prevailing on the last day of respective financial year.)
- 1. The Financial Declaration submitted with the Bid must be certified and signed by a competent and qualified Chartered Accountant/ Statutory Auditor and should be on the Firms' letterhead; affixed with the Firm's seal.
- 2. Audited Balance sheet and Profit & Loss account statement of the Bidder for each of the last 3 audited financial years FY 2020-21, FY 2021-22 and FY 2022-23 shall submitted as supporting evidence.

Authorisation Form for Manufacturer (MAF) (Document – 8)

<To be printed on the letterhead of the OEM or their Authorised Distributor and duly signing and sealing it from the Authorised Signatory of the OEM or their Authorised Distributor>

<The MAF is not applicable for the Bidder who is a Manufacturer. In such case the Bidder has to give a self-declaration stating its status as OEM and giving details about its facilities on their letterhead, duly signing and sealing it>

Date: Place:

To,

Member Secretary

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022

Subject: Bid Submission Cover Letter for-

RFP Ref <RFP reference No.>

Dear Sir,

WHEREAS <Name and address of the Manufacturer or their Authorised Distributor> who are official producers / distributors (Strike out whichever is not applicable) of < Name of the product with description (pls use Annexure, if required) and product code > do hereby authorize <name of the Bidder> located at <Address of the Bidder> (hereinafter, the "Bidder") to submit a bid of the following Products produced by us, for the Supply Requirements associated with the above Invitation for Bids. When resold by Name of the Bidder>, these products are subject to our applicable standard end- user warranty terms.

We assure you that in the event of <Name of the Bidder>, not being able to fulfil its obligation as our Authorised Dealer and Service Provider in respect of our standard Warranty Terms we would continue to meet our Warranty Terms through alternate arrangements.

We also confirm that <Name of the Bidder> is our authorized Dealer and Service and can hence provide maintenance and upgrade support for our products.

| Name | |
|---|---------|
| In the capacity of | |
| Signed | |
| Duly authorized to sign the authorization for and on behalf of: | Dated : |

Manufacturer's Declaration about 100% compliance to Minimum Technical Specifications (Document – 9)

<This declaration must be on the letterhead of the Manufacturer or their Authorised Distributor, must be signed by a person of relevant competent authority, and must be included by the Bidder in its bid as specified in the Instructions to Bidders. The same should be accompanied by the compliance statement to the minimum required technical specifications (as mentioned in **Section 5.6**), duly filled and supported by relevant certifications and printed on Manufacturer's Letterhead>

| relevant certifications and printed on Manufacturer's Letterhead> | y, aary imea ana cappentea 2, |
|--|---|
| | Date: Place: |
| Member Secretary Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022 | |
| Subject: Bid Submission Cover Letter for- | |
| Dear Sir, | |
| WHEREAS <name <name="" address="" and="" are="" authofficial="" declare="" distributors="" manufacturer="" of="" or="" producers="" product="" solemnly="" td="" that<="" the="" their=""><td></td></name> | |
| We have read and understood the minimum technical specifications this RFP and our feature-wise compliance status for the product pro and product code> is correct for every specification mentioned the statement attached herewith duly filled, signed and stamped. | posed <name of="" produc<="" td="" the=""></name> |
| We understand that if any of the points in this declaration is found to declared as non-responsive and will not be considered for further even | |
| Name In the capacity of Signed Duly authorized to sign the authorization for and on behalf of: Dated: | |

Format to Project Citation (Document - 10)

(Refer Section 7 for Format of Project Citation) (For Pre-qualification refer Section 7: 7.1 (D), For Technical Qualification refer Section 7:7.2 (D))

Format to Undertaking for Office in Maharashtra (Document – 11)

(To be submitted on the Letter of lead bidder)

| {Place, Date} To, Member Secretary Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022 |
|---|
| Subject: Undertaking of for Office in Maharashtra RFP Reference No: MPCB/ |
| Sir, |
| We,, (name of the Bidder) who are an established and reputed firm having offices at(address) do hereby undertake to establish a fully functioning office within the jurisdiction of State of Maharashtra within 15 days of award of work for the tender referenced above. We also undertake to assure the authority that the said office in Maharashtra shall remain fully functional and operational in the duration of the contract with the Maharashtra Pollution Control Board, Mumbai. |
| It is understood that failure to comply with this undertaking in any manner whatsoever Maharashtra Pollution Control Board, Mumbai shall have the right to reject my / our bid and forfeit the submitted Earnest Money Deposit (EMD), and if the bid has resulted in a contract, the contract is liable to be terminated without prejudice to any other right or remedy (including blacklisting) available to Maharashtra Pollution Control Board, Mumba |
| Yours Sincerely, |
| Signature of Notary (with official seal) Name: Designation: Seal: Business Address: |

Format for Undertaking of "Non-Blacklisting" (Document – 12)

(To be submitted on the letterhead of the Bidder)

{Place, Date}
To,

Member Secretary

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, **Sion Circle, Sion, Mumbai-400 022**

Subject: Undertaking of Non-Blacklisting for-Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract.".Reference No: MPCB/

We, the undersigned, hereby declare that We are not under a declaration of ineligibility / banned / blacklisted by any State or Central Government / any other Government institutions in India for any reason as on last date of submission of the Bid or convicted of economic offence in India for any reason as on last date of submission of the Bid.

We hereby declare that:

We have examined and have no reservations to the Bidding Documents, including Addenda issued, if any, in accordance with Instructions to Bidders.

We offer to execute the said work in conformity with the Bidding Documents

Our bid shall be valid for a period of 120 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents and it shall remain binding upon us and maybe accepted at any time before the expiration of that period.

If our bid is accepted, we commit to submit a performance security in accordance with the Bidding Documents.

We hereby also declare that

We are not convicted for any of the following offenses under the Prevention of Corruption Act, 1988; Or We have not been convicted under any Indian Penal Code or any law in force, for creating public injury to person or property or risk to public health as a part of execution of public procurement contract; We have not been blacklisted/banned/debarred by any Government (State/Central) / Semi Government/ Corporation / PSU in India in last 3 years;

We have not violated the code of integrity in last 2 years;

Our Security Deposit or EMD or performance security deposit or any other deposit was not withheld (fully or partly) by the purchaser during any procurement process or contract execution undertaken by purchaser in last 2 years;

We have not withdrawn our bids post submission of the same. (maximum incidents are limited to 3)

If Owner / Partner / Director / Trustee of the organization is Owner / Partner / Director / Trustee of any other organization: We hereby declare that Our Owner / Partner / Director / Trustee are not Owner / Partner / Director / Trustee of any other organization which is presently blacklisted / Banned / Suspended by the Government / Semi-Government / PSUs, and any other organization to which the provisions of GoM GR dated 01.12.2016 are applicable.

We declare that we comply with all clauses mentioned under section 5.8.5 of Government of Maharashtra Government Resolution dated 01.12.2016.

We accept that in case of any irregularity, lapses, non-compliances, MPCBs decision shall be final and binding on us.

We accept all the terms and conditions of this bidding document and undertake to abide by them, including the condition that you are not bound to accept highest ranked bid / lowest bid or any other bid that you may receive.

We also accept that, if it is found that any of the information provided by us is proved wrong/falsified/ deviated/ incorrect/ concealed from facts, our bid will be summarily rejected along with the blacklisting of our firm and forfeiture of our EMD/ PBG, as the case may be.

Yours sincerely, Authorized Signatory (Authorized person shall attach a copy of Authorization for signing on behalf of Bidding Company)

Full Name and Designation

To be submitted on non-judicial stamp paper of Rs. 100/-).

| Signature of Notary (with official seal) | |
|--|--|
| Name: | |
| Designation: | |
| Seal: | |
| Business Address: | |

Format for Declaration from HR department of the Bidder (Document – 13)

<< To be printed on Bidder Company's Letter Head and Signed by Authorized Signatory/HR Head>>

To,

Member Secretary

Maharashtra Pollution Control Board,

Kalpataru Point, 3rd floor, Opp. PVR Cinema,

Sion Circle, Sion, Mumbai-400 022

Dear Sir,

Subject: HR Department Declaration - [Document title]

RFP Reference No: MPCB/

With reference to the subject RFP, we hereby declare that we have ____ employees working on our payroll or associated with us through proper binding agreement having minimum qualification as graduate in any stream and having minimum experience in the domains required to execute this assignment as per the requirements of the RFP. We are attaching herewith the Bio Data of each of the proposed team member highlighting their Educational Qualification, Relevant Experience and major assignments handled in relevant field.

We also accept that, if it is found that any of the information provided by us is proved wrong/falsified/ deviated/ incorrect/ concealed from facts, our bid will be summarily rejected along with the blacklisting of our firm and forfeiture of our EMD/ PBG, as the case may be.

Yours sincerely,

Authorized Signatory/ HR Head (Authorized person shall attach a copy of Authorization for signing on behalf of Bidding Company)

Encl: Bio Data of Key members of the Proposed team

Format for Non-Disclosure Agreement (Document – 14)

[Company Letterhead]

This AGREEMENT (hereinafter called the "Agreement") is made on the [day] day of the month of [month], [year], between, Maharashtra Pollution Control Board on the one, (hereinafter called the "MPCB") and, on the other hand, [Name of the Bidder] (hereinafter called the "Bidder") having its registered office at [Address] WHEREAS

- 1. The "MPCB" has issued a public notice inviting various organizations for provision of Request for Proposal (RFP) for Selection of Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract.". (hereinafter called the "Project") of the MPCB;
- 2. The Bidder, having represented to the "MPCB" that it is interested to bid for the proposed Project,
- 3. The MPCB and the Bidder agree as follows:
 - a) In connection with the "Project", the MPCB agrees to provide to the Bidder a detailed document on the Project vide the Request for Proposal document. The Request for Proposal contains details and information of the MPCB operations that are considered confidential.
 - b) The Bidder to whom this information (Request for Proposal) is disclosed shall
 - i. hold such information in confidence with the same degree of care with which the Bidder protects its own confidential and proprietary information;
 - ii. restrict disclosure of the information solely to its employees, other member with a need to know such information and advice those persons of their obligations hereunder with respect to such information;
 - iii. use the information only as needed for the purpose of bidding for the Project;
 - iv. except for the purpose of bidding for the Project, not copy or otherwise duplicate such information or knowingly allow anyone else to copy or otherwise duplicate such information; and
 - v. undertake to document the number of copies it makes
 - vi. on completion of the bidding process and in case unsuccessful, promptly return to the MPCB, all information in a tangible form or destroy such information

- 4. The Bidder shall have no obligation to preserve the confidential or proprietary nature of any information which:
- was previously known to the Bidder free of any obligation to keep it confidential at the time of its disclosure as evidenced by the Bidder's written records prepared prior to such disclosure; or
- is or becomes publicly known through no wrongful act of the Bidder; or
- is independently developed by an employee, agent or contractor of the Bidder not associated with the Project and who did not have any direct or indirect access to the information.
 - 5. The Agreement shall apply to all information relating to the Project disclosed by the MPCB to the bidder.
 - 6. MPCB will have the right to obtain an immediate injunction enjoining any breach of this Agreement, as well as the right to pursue any and all other rights and remedies available at law or in equity for such a breach.
 - 7. MPCB reserves the right to share the information received from the bidder under the ambit of RTI Act.
 - 8. Nothing contained in this Agreement shall be construed as granting or conferring rights of license or otherwise, to the Bidder, on any of the information. Notwithstanding the disclosure of any information by the MPCB to the Bidder, the MPCB shall retain title and all intellectual property and proprietary rights in the information. No license under any trademark, patent or copyright, or application for same that are now or thereafter may be obtained by the MPCB is either granted or implied by the conveying of information. The Bidder shall not alter or obliterate any trademark, trademark notice, copyright notice, confidentiality notice or any notice of any other proprietary right of the MPCB on any copy of the information, and shall reproduce any such mark or notice on all copies of such information.
 - 9. This Agreement shall be effective from the date of signing of this agreement and shall continue perpetually.
 - 10. Upon written demand of the MPCB, the Bidder shall (i) cease using the information, (ii) return the information and all copies, notes or extracts thereof to the MPCB forthwith after receipt of notice, and (iii) upon request of the MPCB, certify in writing that the Bidder has complied with the obligations set forth in this paragraph.
 - 11. This Agreement constitutes the entire Agreement between the MPCB and the Bidder relating to the matters discussed herein and supersedes any and all prior oral discussions and/or written correspondence or agreements between the two parties. This Agreement may be amended or modified only with the mutual written consent of

the parties. Neither this Agreement nor any right granted hereunder shall be assignable or otherwise transferable.

- 12. Confidential information is provided "As-Is". In no event shall the MPCB be liable for the accuracy or completeness of the confidential information.
- 13. This agreement shall benefit and be binding upon the MPCB and the Bidder and their respective subsidiaries, affiliate, successors and assigns.
- 14. This agreement shall be governed by and construed in accordance with the Indian laws.

For and on behalf of the Bidder

(Signature)

(Name of the authorized Signatory)

Designation :
Date :
Time :
Seal :
Business Address

ANNEXURE - II

Documents for Financial Proposal

| Format No. | Description | Submitted (Yes/No) |
|---------------|--------------------------------|-----------------------|
| Format 1 | Commercial bid covering Letter | |
| Format 2 | Commercial bid | |

Commercial Proposal Cover Letter (Format – 1)

(To be submitted on the letterhead of the bidder)

{Place, Date}
To,

Member Secretary

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022 Tel: Mail id:

Request for Proposal (RFP) for Selection of Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract."

RFP Reference No:

Dear Sir.

We, the undersigned Bidders, having read and examined in detail all the bidding documents in respect of RFP referred above do hereby propose to provide Equipment and Services as required in this RFP document.

Price and Validity: All the prices mentioned in our Bid are in accordance with the terms as specified in the bidding documents. All the prices and other terms and conditions of this Bid are valid for a period of 120 days from the last date of submission of the Bids. The prices we have offered will remain fixed and subject to price escalation mention in the RFP during the period of Contract.

Taxes: We are an entity registered in India and do hereby confirm that our bid price is exclusive of all applicable taxes (i.e. GST). All relevant/ applicable taxes would be considered for reimbursement on actual as per MPCB's discretion and prevailing Government laws

Deviations: We hereby declare that all terms and conditions mentioned in the RFP (all volumes, annexures and corrigendum's) are acceptable to us without any deviations and all the services shall be performed strictly in accordance with the bid documents

Unit Rates: We have indicated in the relevant Annexures enclosed, the unit rates for the purpose of an account of payment as well as for price adjustment, in case of any increase / decrease from the scope of work under the contract.

Bid Price: We declare that our Bid Prices, exclusive of all applicable taxes, duties, and GST are for the entire scope of the work and requirements as specified in the Bid documents.

Contract Performance Bank Guarantee: We hereby declare that in case the Contract / Order is awarded to us, we shall submit the Contract Performance Bank Guarantee in the form prescribed in the RFP.

We hereby declare that our Bid is made in good faith, without collusion or fraud and the information contained in the Bid is true and correct to the best of our knowledge and belief. We also understand that if our bid is conditional in any way, it shall be summarily rejected.

We understand that our Bid is binding on us and that you are not bound to accept a bid you receive.

We confirm that no Technical information or deviations are attached here with this Commercial offer.

We confirm that decision of MPCB will be final and binding on us.

Yours faithfully,

| (Name and Designation of the | ne Authorized signatory of the Bidder) |
|------------------------------|--|
| Name: | |
| Designation: | |
| Seal: | |
| Date: | |
| Place: | |
| Business Address: | |

Format for Commercial Bid (Format – 2)

Commercial Bid Format

Note: Commercial Bid / Offer has to be entered online only. An <u>Online Form</u>, similar to the Commercial format given below, will be available to the bidders during Online Bid Preparation stage where bidders would quote their offer Additionally the bidders should print this format and fill with the rates asked, sign and seal the document and upload the same as a part of Envelope 2 submission)

The bidders should strictly follow the format given below for submitting the price -bids

| SI. No. | Item Description Equipment Name | Quantity (Q) | Equipment Supply Price including delivery at site Unit Price in Rs. P (A) | Equipment Supply Price including delivery at site Total Price in Rs. P (B=A*Q) | Training Price (Lumpsum, at MPCB sites & abroad) in Rs. P (C) | Installation Commissioning Unit Price in Rs. P (D) | Installation Commissioning, Training Price Total Price in Rs. P G=(C+D)*Q | 5 year CAMC (Post 1 year warranty) Unit Price in Rs. P (E) | 5 year CAMC (Post 1 year warranty) Total Price in Rs. P (F=E*Q) | Unit Price incl. of Supply, Installation, Training CAMC TOTAL AMOUNT Without GST in Rs. P | TOTAL AMOUNT Without GST (In Words) |
|--|---|-----------------|---|--|---|--|--|--|---|---|--|
| 1.01 | Handy VOC Samplers with necessary accessories/consumables as | 115.00 | | | | NA | | | | | |
| 1.02 | mentioned in RFP Continuous Online VOC Monitoring (CAAQM) Stations inclusive of Supply, Installation, Commissioning, Training as per Scope of work defined | 6.00 | | | | | | | | | |
| Total in Figures Quoted Rate in Words | | | | | | | _ | | | | |

Note:

- 1. The Bidder shall provide for all costs required for the entire duration of the contract. MPCB shall not be liable to pay any additional costs, apart from that mentioned in the table above.
- 2. The rate quoted by bidder shall include all costs associated with fulfilling the project deliverables, Out of Pocket Expenses including but not limited to Travelling, Lodging, Food, insurance, Training, etc. MPCB shall not pay any additional cost to bidder.
- 3. All costs shall remain valid for the entire duration of the contract.
- 4. Prices quoted are for the scope of work which includes supply of equipment, installation, commissioning, training, Warranty support for ONE (1) year and CAMC for FIVE (5) years and Operation and Maintenance of Online VOC Monitoring Stations for SIX (6) years.
- 5. The prices considered for evaluation of Price Bid will be without Taxes. GST / Taxes at the time of billing will be paid extra and at actuals.
- 6. The prices are valid for 180 days from the date of bid.

For and on behalf of: Signature (Authorized Representative and Signatory of the Bidder): Name of the Person: Designation: Date:

BIDDERS ARE REQUESTED TO SUBMIT ONLINE COMMERCIAL BID FORMAT

A COPY OF COMMERCIAL BID PRINTED ON LETTERHEAD TO BE UPLOADED AS PART

OF ENVELOPE 2

Annexure - III

Other Documents/Formats

| Document 1 | Format for Pre-Bid Queries |
|------------|----------------------------|
| Document 2 | Performance Bank Guarantee |

Format for Pre-Bid Queries

<< To be printed on Bidder Company's Letter Head and Signed by Authorized Signatory) To,

Member Secretary

Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022

Dear Sir,

Subject: Pre-bid queries for- Selection of Agency to (i) Supply Handy VOC Samplers, (ii) Setting up of Online VOC Monitoring Stations at Six (06) Locations, and provide various related services including comprehensive O & M Contract.".

RFP Reference No: MPCB/

With reference to the subject RFP, please find below pre-bid clarifications request.

Clarification Requested by:

Name

Designation

Company

Address

Contact Number

e-mail ID

Date

Clarifications Requested:

| Clarif | ications R | equestea: | | | | | |
|--------------------------------|------------|-----------|--------|---|---------|---------------------------------|--|
| Bidder's | | | | Request | For Cla | rification | |
| Name and complete official | | | | Telephone, Fax and E-mail of the organization | | | |
| address of Organization | | | | n Tel: | | | |
| submitting query / request for | | | | r Fax: | | | |
| clarification | | | Email: | | | | |
| Sr. | Clause | Dogo No | Conte | ent of | RFP | Change Requested/ Clarification | |
| No. | No. | Page No. | Requ | Requiring Clarification required | | required | |
| 1 | | | | | | | |

| Note: | Bidders | are rec | hatsaur | to | nrovide | th△ | aueries | in | 1/19 | Evcel | forms | 21 |
|-------|---------|---------|-----------|----|---------|-----|---------|----|------|-------|---------|----|
| MOLE. | Didueis | are rec | juesieu i | ω | provide | uie | quenes | ш | IVIS | EXCE | 1011116 | 11 |

Thanking you,

(Name and Designation of the Authorized signatory of the Bidder)

Name:

Designation:

Seal: Date: Place: Business Address:

Format for Bank Guarantee

<< To be executed on Stamp Paper as mandated by the Bank issuing the PBG>>>

| Ref: | | | Date [.] | | |
|---|---|--|---|--|--|
| | ee No.: | | | | |
| No. | | | | Date | э: |
| То, | | | | | |
| Kalpataru Poin | ollution Contro | p. PVR Cinema | , | | |
| Supply Hand Six (06) Loca O & M Contra Pollution Contra called the Bidd are holding in (write the sum or damage tha Bidder of any of We agree tha conditions of the | At VOC Sampations, and pact."." (hereing told Board - (hereing trust in favor of there in words) at may be caused the terms and the decision he said contra | plers, (ii) Setti provide various after called the sate inafter called the ertify that at the report of the Purchase to indemnify are ed to or suffered d conditions of the of the Purchase act and/or in the | ng up of Onlines related service aid 'Contract') entered equest of the Bid or, the amount of ad keep indemnified by the Purchasthe said contract ser, whether any experformance the | te VOC Monitor ces including tered into between the cered into betwe | er against any loss any breach by the rformance thereof. of the terms and committed by the |
| be final and bir | nding on us and | • | he said loss or da | • | he Purchaser shall paid by us forthwith |
| contained shal performance | l remain in full and fulfillment hereina | force and effect in all respec after called the | during the period ts of the said said date and th | I that shall be take contract by the nat if any claime uarantee before aga | e guarantee hereing cen for satisfactory ne Bidder i.e. till accrues or arises the said date, the sinst us |

| fact that the same is enforced within six months after the said date, provide such claim has been given to us | chaser before the said |
|---|---|
| that effect from the Purchaser. | |
| The Performance Bank Guarantee shall be valid from the date of acceptance and shall continue till sixty (60) days after the completion of all contracts warranty obligations and defect liability period as per CVC guidelines. It is this guarantee is effective from the date of the said contract and that we Bank Ltd, undertake not to revoke this guarantee during its currency without of the Purchaser. | ual liabilities including sfully understood that |
| We undertake to pay to the Purchaser any money so demanded notwithstadisputes raised by the Bidder in any suit or proceeding pending before relating thereto our liability under this present bond being absolute and une | any court or Tribunal |
| The payment so made by us under this bond shall be a valid discharge of o there under and the Bidder shall have no claim against us for making such | |
| The provisions relating to Sanctions for Violations specified in the Integrity the Bidder with the purchaser shall be applicable for forfeiture of Performan case of a decision by purchaser to forfeiture the same without assigning an sanction for violation for the Pact. | nce Bank guarantee in |
| We Bank Ltd, further agree that have the fullest liberty, without affecting in any manner our obligations here the terms and conditions of the said contract or to extend time of performant time to time or to postpone for any time from time to time any of the power Purchaser against the said Bidder and to forebear or enforce any of the relating to the said contract and we, Bank Ltd., shall our liability under this guarantee by reason of any such variation or extensions aid Bidder or for any forbearance by the Purchaser to the said Bidder or for or omission on the part of the Purchaser or any other matter or thing whatso law relating to sureties, shall, but for this provision have the effect of so liability under this guarantee. This guarantee shall not be discharged due to the change in the constitution. | reunder to vary any of nee by the Bidder from ers exercisable by the terms and conditions not be released from in being granted to the r any forbearance and never, which under the releasing us from our |
| Bidder. | |
| Date Place Signature | |
| Witness Printed name | |
| (Bank's common seal) | |

Annexure - IV

Draft Conditions of Contract

| This AGREEMENT is made at, Maharashtra, on thisday of, 2024, |
|---|
| BETWEEN |
| <a first<br="" href="mailto:subards-subard</td></tr><tr><td>Sion Circle, Sion, Mumbai -400022, Maharashtra India hereinafter referred to as '<i>MPCB</i>' or ">Part" which expression shall, unless the context otherwise requires, include its permitte successors and assigns |
| And |
| <<***>>, a Company incorporated under the <i>Companies Act, 1956</i> , having its registered office a <<***>> (hereinafter referred to as " <i>Party" or "Second Part"</i> which expression shall, unless the context otherwise requires, include its permitted successors and assigns). |
| Each of the parties mentioned above are collectively referred to as the ' <i>Parties</i> ' and individuall as a ' <i>Party</i> ' |
| Whereas: |
| Whereas MPCB has envisaged (hereinafter referred to as the "said Project"); |
| And whereas MPCB has published the RFP to seek services of a reputed Agency for; |
| And whereas M/s; |
| And whereas MPCB and M/s have decided to enter into this Agreement o |

NOW, THEREFORE, THIS AGREEMENT WITNESSETH and the parties hereto hereby mutually agree as follows:-

The Agreement shall consist of this Contract Form and the following documents and the exhibits, drawings, specifications and other documents referred to therein (hereinafter the 'Contract Documents'), all of which by this reference are incorporated herein and made part hereof:

- Notification of Award / Work Order
- 2. RFP / Tender Form
- 3. Scope of Work as given in the RFP / Tender Document.
- 4. Project & Payment schedule as given in the RFP / Tender Document.
- Terms & Conditions of Contract as given in the RFP / Tender Document.
- 6. Service Level Agreement (SLA) as given in the RFP / Tender Document.
- 7. Technical proposal of Tenderer.
- 8. Financial Proposal

This Agreement sets forth the entire contract and agreement between the parties pertaining to "[Document title]" and supersedes any and all earlier verbal or written agreements. This agreement shall prevail over all other Contract Documents. In the event of any discrepancy or inconsistency within the contract documents, then the documents shall prevail in the order listed above.

In consideration of the payments to be made by the Corporation to the Agency as hereinafter mentioned, the Agency hereby covenants with the Purchaser to maintain and operate the entire proposed solution and to remedy defects therein in conformity in all respects with the provisions of the Contract. The Contract Price or such other sum as may become payable under the provisions of the agreement shall be at the times and in the manner prescribed in the Agreement.

Any notice under this agreement shall be in the form of letter, fax. Notices to either party will be given at such address/addresses as such party shall specify from time to time by written notice to the other. In the absence of such notice to the contrary, notice to the Purchaser shall be properly addressed to:

To, Member Secretary Maharashtra Pollution Control Board, Kalpataru Point, 3rd floor, Opp. PVR Cinema, Sion Circle, Sion, Mumbai-400 022

| and notice to the Agency shall be properly addressed to: |
|--|
| A notice shall be effective when delivered or on the notice's effective date, whichever is later. |
| IN WITNESS WHEREOF the parties hereto have caused this agreement to be executed in accordance with their respective laws the day and year first above written. Signed, sealed and delivered |
| Ву |
| Member Secretary |
| For and on behalf of MPCB |
| Signed, sealed and delivered By |
| For and on behalf of the "Agency", |
| Witnesses: |
| (1) |
| (2) |
| (2) |
| NOW THEREFORE, in consideration of the mutual covenants, promises, assurances, |
| representations and provisions set forth herein, the Parties hereto agree as follows: |

Note:

1. The stamp duty payable for the contract shall be borne by the Agency

specified above in the RFP document>>

2. The above Draft Master Service Agreement is only indicative description of the contract agreement. However, the actual contract agreement shall be finalized and notified by the Purchaser after final selection of the Agency

<< Scope of Work, Solution Overview, Project & Payment Schedule, Terms & Conditions as