

MINUTES OF TENDER COMMITTEE MEETING OF PRE-BID

Tender ID: 2021_MPCB_713485_1

Supply, installation and commissioning And Operation & maintenance services of Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMVV)"- 15 Nos

Date & Time: 24th August, 2021 at 1100 Hrs.

Venue: Online meeting through Microsoft Teams.

Committee Members:

MPCB : JD (APC), SROHQ, CAO, LO, SA, MPC Board, Mumbai
CPCB : Mr. S K Sharma, Scientist D, CPCB, Delhi
MAHAGENCO: Mr Vivek P. Ghodmare, Superintending Chemist, Mahagenco

Agenda: Pre-bid meeting for the e-tender: "Supply, installation and commissioning And Operation & maintenance services of Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMVV)"15 Nos. (Tender reference no: MPCB/JD(APC)/MMV/2021-22)

Due to COVID-19, the pre-bid meeting was held online through VC to resolve the queries raised by the different bidders, following bidder were present in the pre-bid meeting:

1. M/S Ecotech Pty Ltd., Australia
2. M/S Chemtrols Industries Private Limited
3. M/s. Envea India Pvt. Ltd.
4. M/S Analyser Instrument Co. Pvt. Ltd.
5. M/S Swan Technical Services Pvt. Ltd

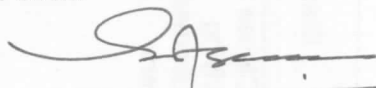
The Committee clarified the queries received in writing / raised by the bidders and same are recorded. The Queries raised by above bidder with tender committee remarks are placed at **Annexure – I.**

The committee has also decided that, pre-bid minutes of the meeting should be treated as part of the Tender Conditions of e-tender and shall be binding to both, MPCB and Bidders.

The committee has also decided that, the queries received after the deadline as per the tender condition / and after pre-BID meeting, shall not be considered for reply & e-tender bidding.

The meeting ended with vote of thanks to the chair.




26/08/2021

Pre-bid queries for Tender Reference no: MPCB/JD(APC)/MMV/2021-22 dated 17.08.2021 for Supply, Installation & Commissioning of Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMV) & Operation & maintenance services of Mobile Continuous Ambient Air Quality Monitoring Van – 15 Nos.

Annexure – I

M/s. Ecotech Pty Ltd, Australia, Queries / request are as follows				
Sr.no.	Tender Page no.	Clause no.	Query raised by the bidder	Clarification given for the query
1.	Page.18	ITB Clause Cl. 2.5 Qualifying Requirements of Bidders	<p>The published PQR under ITB Clause 2.5.1 seems to restrict the participation of established OEMs/ manufacturers of CAAQMS having numerous installations in various PCB's within India.</p> <p>Hence it is requested to please consider our below submission / request positively to enable maximum participation of OEMs towards the said tender.</p> <p>"The bidder should be a manufacturer, or an authorized agent listed in the scope of work and must have supplied, manufactured, installed, commissioned minimum Two (02) nos. of mobile ambient air quality monitoring vans in their existing tenure and must have commissioned minimum 05 nos. of CAAQMS stations with 08 parameters in the last five years and should be in satisfactory operation"</p> <p>This will enable the published PQR under ITB Cl. 2.5.1 to be in line with IFB Cl 2.1 (of Pg 10)</p>	<p>The bidder should be a manufacturer, or an authorized agent listed in the scope of work and must have supplied, manufactured, installed, commissioned minimum Two (02) nos. of mobile ambient air quality monitoring vans in their existing tenure and must have commissioned minimum 05 nos. of CAAQMS stations with 08 parameters in the last three years and should be in satisfactory operation</p>
	Page 10	IFB Clause Cl. 2.1		
2.		Class-I local suppliers' Make in India Initiative of Govt of India. and 'Class-II local suppliers'	<p>We understand that all preferences referred therein to the Class I & Class II local supplier under Aatmanirbhar Bharat / Make in India Initiative in order to promote self-reliance and manufacturing and production of goods and services in India by an OEM/ Manufacturer under Make in India/ Aatmanirbhar Bharat initiative of the Govt of India Order No. P- 5021/2/2017-PP (BE-II) Dated 04th June 2020 shall be extended to the bidder under this tender. Kindly confirm</p>	Not for this tender



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3	Page 24	Cl. 4.4 - Bid Security / Earnest Money	Also, it is requested to please confirm that the EMD in form of Bank Guarantee submitted by bidders 100% owned Indian subsidiary/ Indian establishment on behalf of Bidder is acceptable Also, requested to please provide the following details for issuance of EMD in from of Bank Guarantee. a) MPCB Bank details with Bank Account No. and IFSC code b) MPCB GST No. c) MPCB PAN No.	MPCB Bank details: EMD through BG. Bank Details: Bank Account No. (SBI) : 10184075404 IFSC Code: SBIN0005350 SWIFT Code: SBININBB355 GST No. 27AAAGM0150J1DT E-mail ID: account@mpcb.gov.in Mobile No. : 9869365974
4	Page 116	SCC – Cl. 6.0 (6.1, 6.2 & 6.3) Work Schedule - Delivery period	The work schedule /delivery period of supplies provided in tender for 120 days may be insufficient considering the project being of large scale turnkey nature with 15 nos of supply & Installation of MCAAQMV at different locations across the state of Maharashtra. Hence it is requested to please consider delivery period of supplies as 240 days from date of opening of Letter of credit for both Imports and Local supplies, and Installation & Commissioning to be carried out within 90 days from date of receipt of materials	No change in Tender Condition. Supply period shall be 120 days.
5	Page 30	Cl. 6.5 - Currencies of Bid	Please confirm prices/ price bid in international currency in USD/EUR/GBP/YEN is allowed in addition to domestic supplies and services quoted in INR.	Necessary changes have made in BOQ/ Also, provision of PDF files of Price Bid uploading on tender website is available
6	Price bid	BOQ_1232409.xlsx	The quantity specified under-price bid BOQ_1232409.xlsx format is Qty 01 No. instead of Qty 15 nos. Kindly clarify if total price for single Qty to be inputted or price of Total Qty for 15 nos to be inputted as 01 lot under BOQ_1232409.xlsx format...	Necessary changes shall be made in BOQ. Also, provision of PDF files of Price Bid uploading on tender website is available
7	Page 146, 147	Cl. 4 – General Specification for all Analysers Cl. 4.6 - The analysers should be complete with calibration system. The calibration system should be		Permeation system is not mandatory in Analysers



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		delivered along-with respective span gas cylinder and permeation tubes. he span gas concentration should be within 60 - 90% of first measuring range.. Cl. 4.7 - The permeation tube and the calibration gases provided with the system shall have Traceability to NIST.	The specified permeation bench/ chambers under respective Multipoint Gas Calibration system is generally not available with most of the vendor, hence requested to generalize the same by deleting the text "three" chamber based permeation system and provision of permeation tubes in calibration since the CAAQMS system will be calibrated as per NIST standard traceable calibration cylinder.	However, the permeation tubes is required in Multi gas calibration system As per CPCB's Technical Specifications for Continuous Ambient Air Quality Monitoring (CAAQMS) Station (Real Time) dated July, 2019
8	Page 157	Cl. (G) 2.5 - BTX Monitor / Analyser Technical Specification Cl. 2.5 Calibration Unit With Span Gas / In Built Calibration With/Permeation Tubes And Gas Mixing / Dilution Facility	Also please note that as per latest update, CPCB had removed the requirement of permeation tube on account of technical reasons as there is frequent variation in concentration resulting in high span drift.	Permeation system is not mandatory in Analysers However, the permeation tubes is required in Multi gas calibration system As per CPCB's Technical Specifications for Continuous Ambient Air Quality Monitoring (CAAQMS) Station (Real Time) dated July, 2019
9	Page 158	Cl. (J) Multi Calibration System (Pg 158) Cl. J (a) – Gas Calibration System "The system should include at least three permeation chambers and should accept a Permeation Tube up to 11 cm in total length and 2 cm in diameter."		
10		Refuelling charges of Vehicle towards (MCAAQMV) during operation and O&M period	Kindly confirm the refuelling charges of Vehicle during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB.	Refueling charges will be borne / reimbursed by MPCB



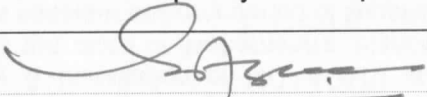
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11		Refuelling of Petrol Generator towards (MCAAQMV) during operation and O&M period	Kindly confirm the refuelling of Petrol Generator during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB	Refueling charges will be borne / reimbursed by MPCB
12		Appointment and monthly Salary of Driver and Cleaner for Vehicle.	We understand that appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB.	Appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of hand over and During O&M period shall be in the scope of Contractor / supplier by following all government rules and regulations.
13		Electricity Charges	Kindly confirm the monthly Electricity Charges (if applicable) during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB	Electricity charges (If any) will be borne by the MPCB
14		Road Tax	Please confirm if road tax shall be in the scope of MPCB or to be paid by Contractor / supplier and will be reimbursed against submission of documentary evidence by MPCB.	Yes, MPC Board will reimbursed against submission of Documentary evidence by the Contractor / supplier

M/s. Envea India Pvt. Ltd., Queries / request are as follows

Sr.no.	Tender Page no.	Clause no.	Query raised by the bidder	Clarification given for the query
1.	Page 30	Vol – I Instruction To Bidder Clause no. 6.5 - Currencies of Bid	We understand that as per Attachment- 2 – Summary of Price bid allows to offer on the basis split currency (i.e. supplies & services in Indian Currency and Analyzers in foreign Currency. However, in the BOQ_1232409.xls there is provision for price in INR only. So we understand that the total value filled in BOQ should be converted from foreign currency that mentioned in attachment-2 into INR so that while placing the order prices will be considered in Euro as mentioned in attachment-2. We request your acceptance.	Necessary changes have made in BOQ/ Also, provision of PDF files of Price Bid uploading on tender website is available




26/08/2021

2.	Page 116	SCC – Clause no. 6.0 (6.1, 6.2 & 6.3) Work Schedule	The project being of large scale turnkey nature with 15 nos of supply & Installation of MCAAQMV at different locations across the state of Maharashtra. Hence it is requested to please consider delivery period of supplies as 180 Days from date of opening of Letter of credit for both Imports and Local supplies, and Installation & Commissioning to be carried out within 30 days from date of receipt of materials.	No change in Tender Condition. Supply period shall be 120 days from the date of notification of award
3	Page 143	Technical Specifications Point no. 1.0 Mobile Monitoring Van	Please note that dimensions mentioned is as per CAAQMS fixed station. We request you to accept the dimensions as per the offered mobile van chassis.	Technical Specifications of body fabrication of mobile AAQMS van and DG set specifications Attached in Annexure – A
4	Page 13 & 14	Mobile Van Parking Location	Kindly confirm the Mobile Van Parking Location selection of Vehicle during operation of MCAAQMV from date of handover and during O&M period shall be provided by MPCB.	MPCB will provide the tour programme of the Van. One Engineer will accompany the van, wherever it goes. Further when the van is at stationary condition (parked at RO/SRO office, Engineer should perform the calibration and other necessary maintenance of the analysers)
5		Refueling for Mobile Van & Petrol Generator	Kindly confirm the re-fueling charges of Mobile Van & Re-fueling Charges of Petrol Generator during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB, else kindly confirm the per day kilometer for each Van & we shall adjust the fuel Cost in O & M. However, if vehicle used more than mentioned, vendor will charge fuel cost accordingly to MPCB	Refueling charges will be borne / reimbursed by MPCB
6		Driver Recruitment & Salary	Kindly confirm, in whose scope is recruitment & monthly Salary of Driver during operation of MCAAQMV from date of handover and during O&M period.	Appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of handover and During O&M period shall be in the scope of Contractor / supplier by following all government rules and regulations.



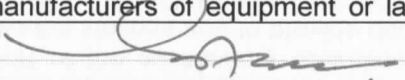
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7	Selection of Monitoring Site Location and permission	Kindly confirm that MPCB shall provide Monitoring site location and also all necessary permission including power supply at these locations.	Yes, Monitoring site location and necessary permission shall be given at later stage
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M/s. Analyser Instrument Co. Pvt. Ltd, Queries / request are as follows

Sr.no.	Tender Page no.	Clause no.	Query raised by the bidder	Clarification given for the query
1.	Page 18	2.5.1 (page 18 of 253)	The bidder should be a manufacturer or authorized agent as listed in the scope of work who must have manufactured, supplied, tested and commissioned minimum One (01) nos. Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMV) in their existing tenure and should have commissioned minimum Five (05) nos. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS); for online monitoring of minimum Five (5) number of notified parameters in the last three years and should be in satisfactory operation.	No change in Tender Condition
2.	Page 19	2.5.4 (page 19 of 253)	ii) The bidder should be a manufacturer or authorized agency as listed in the scope of work who must have manufactured, supplied, tested, commissioned/built and provided O & M to minimum One (01) nos. similar Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMV) in their existing tenure and should have supplied, commissioned minimum Five (05) nos. of Continuous Ambient Air Quality Monitoring Stations (CAAQMS); for monitoring minimum Five (5) number of notified parameters as per AQ Standards 2009 in the last three years and which should be in satisfactory operation as on date of bid opening.	No change in Tender Condition
3	Page 19	2.5.5 (page 19 of 253)	The bidder should furnish the information on all past supplied and satisfactory performance for both 2.5.1 and 2.5.4 (ii) above, in "Performance Statement" as per Attachment No. 8B & 8C respectively of Section III and minimum one (1) no. documentary evidences (client certificates in favour of bidder or manufacturers of equipment or latest service report) in	No change in Tender Condition




26/08/2018

			support of the satisfactory operation of similar mobile air monitoring stations and to provide documentary evidence of five(5 no.) of CAAQMS operated satisfactorily.	
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M/s. Swan Technical Services Private Limited, Queries / request are as follows:				
Sr.no.	Tender Page no.	Clause no.	Query raised by the bidder	Clarification given for the query
1.	Page 116	Technical Specification – Vol- II Schedule of requirement for (MCAAQMV). Cl. 4.0 Air Quality Analysis System (CO, SO2, NOx, BTX, PM10, and PM2.5)	<p>The Work schedule /delivery period of supplies provided in tender for 120 days may be insufficient considering the project being of large-scale turnkey nature with 15 nos. of supply & Installation of MCAAQMV at different locations across the state of Maharashtra,</p> <p>Hence it is requested to please consider delivery period of supplies as 240 days from date of opening of Letter of credit for both Imports and Local supplies, and Installation & Commissioning to be carried out within 90 days from date of receipt of materials</p>	No change in Tender Condition. Supply period shall be 120 days from the date of notification of award
2.	Page No 143 to 146	Technical Specification – Vol- II Schedule of requirement for (MCAAQMV). Cl. 4.0 Air Quality Analysis System (CO, SO2, NOx, BTX, PM10, and PM2.5)	<p>We understand from the schedule of requirement and technical specification that following parameters namely SO2, NO-NO2-NOx, CO, BTX, PM10 and PM2.5 are to be monitored in tendered MCAAQMV. However the attached Technical Data compliance sheet Annexure - I of Volume – II have included the following specification which we understand is not part of the tendered MCAAQMV.</p> <p>a) Sr. No. 3.2 – 5KVA UPS with 2 hours backup (Pg 183 of 253) b) Sr. No. 7 - B – Ammonia NH3 Analyser – (Pg 194 of 253) c) Sr. No. 7 - D – Ozone O3 Analyser – (Pg 196 of 253) d) Sr. No 10 – Specifications of Day Light & Night Visible Data Display System – Display Board (Pg 229 of 253) Please clarify</p>	<p>5 KVA Stabilizer required. (Specifications given in Page no 154 Also in Vol-II Annexure-I)</p> <p>a) Ammonia Analyser, and display Board will not be the part of this tender. However, each van should have Computer along with the data logger/DAS & Printer(B/w) for data logging printing.</p> <p>b) Ozone analyzer shall be included in this tender. (Specifications given in Page 151, Also in Vol-II Annexure-I)</p>



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3	Page 146, 147	Cl. 4 – General Specification for all Analyzers Cl. 4.6 - The analyzers should be complete with calibration system. The calibration system should be delivered along-with respective span gas cylinder and permeation tubes. He span gas concentration should be within 60-90% of first measuring Range.	The specified permeation bench/ chambers under respective Multipoint Gas Calibration system is generally not available with most of the vendor, hence requested to generalize the same by deleting the text “three” chamber based permeation system and provision of permeation tubes in calibration since the CAAQMS system will be calibrated as per NIST standard traceable calibration cylinder.	Permeation system is not mandatory in Analysers However, the permeation tubes is required in Multi gas calibration system, As per CPCB’s Technical Specifications for Continuous Ambient Air Quality Monitoring (CAAQMS) Station (Real Time) dated July, 2019
4	Page 160	8.0 METEOROLOGICAL MONITORING SYSTEM All sensors should be NIST (National Institute for Standards and Technology, USA) traceable.	Generally, as per CPCB guidelines NIST or IMD any other international agency’s traceability is approved for Metrological station. Because all are equivalent to NIST, So please allow us other agency traceable certification.	As per CPCB’s Technical Specifications for Continuous Ambient Air Quality Monitoring (CAAQMS) Station (Real Time) dated July, 2019
5		Refueling charges of Vehicle towards (MCAAQMV)during operation and O&M period	Kindly confirm the refuelling charges of Vehicle during operation of MCAAQMV from date of hand over and during O&M period shall be in the scope of MPCB	Refueling charges will be borne / reimbursed by MPCB
6		Appointment and monthly Salary of Driver and Cleaner for Vehicle.	We understand that appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of hand over and During O&M period shall be in the scope of MPCB.	Appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of hand over and During O&M period shall be in the scope of Contractor / supplier by following all government rules and regulations.



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7		Electricity Charges	Kindly confirm the monthly Electricity Charges (if applicable) during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB	Electricity charges (If any) will be borne by the MPCB
8		Vol-II, Technical Specifications Clause 7.0(A)-09	Response Time for NOx analyzer shall be 30 seconds as manufacturer's standard. Also, CPCB specifications call for response time of 120 seconds. Please confirm acceptance of the same.	Yes, as per CPCB's Technical Specifications for Continuous Ambient Air Quality Monitoring (CAAQMS) Station (Real Time) dated July, 2019
9		Vehicle Model no: LPT709EX2	Please note that model LPT 709 EX2 is BSI V engine, however as per new guidelines all engines should be BSVI, also note that the said model is not available in market. Kindly provide an alternate model	Consider Starbus 32+D AC LP 712/45 / LPT 709 EX2/ or equivalent, BS-VI variant
10		Selection of monitoring site, Location, and permission	Kindly confirm that MPCB shall provide Monitoring site location and also all necessary permission including power supply at these locations.	MPCB will provide the tour programme of the Van. One Engineer will accompany the van, wherever it goes. Further when the van is at stationary condition (parked at RO/SRO office, Engineer should perform the calibration and other necessary maintenance of the analysers)
11	Page 13	Petrol Generator Set-10 KVA	Please note that 6.5 KVA portable petrol generator are available in the market which can be fitted easily in the Mobile Van and has been used as a standard practice, Kindly confirm your acceptance	DG set specifications Attached in Annexure - A



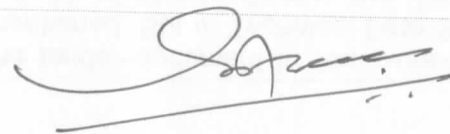
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12	Page 181	Quantity of 2 Ton AC , 10 KVA UPS, NH3, O3 analyzers, Data display Board.	As per the tender document in Annexure-1 only 2 TON's(2 units) mentioned, But in Technical Data Sheet for SUPPLY and O & M of Mobile Continuous Ambient Air Quality Monitoring Van (MCAAQMV) section mentioned details of 1 Ton AC and 10 KVA and NH3 , O3 analyzer and Display Board (4'X12') details, So please confirm the scope of supply items.	Consider 2 Ton Capacity Split Air conditioner (2 units) Ammonia Analyser, and display Board will not be the part of this tender However, each van should have Computer along with the data logger/DAS & Printer (B/w) for data logging printing. Ozone analyzer shall be included in this tender. (Specifications given in Page 151, Also in Vol-II Annexure-I) & Annexure – II with this document
13	Page 144	1.2 Dimensions of the Chassis- Thermally Stable Housing (Body Built up) Inside minimum length: Approx. 4200 mm Inside minimum width: Approx.3500mm Inside minimum height: Approx. 2500 mm	As per Maharashtra RTA guidelines tender dimension of housing container is difficult for mobile van moving from one city to another city, So requested to allow us the housing (Body Built up) dimensions as per Maharashtra RTA guidelines. Please clarify the dimensions.	Technical Specifications of body fabrication of mobile AAQMS van and DG set specifications Attached in Annexure – A
14	Price Bid	BOQ_1232409.xls	BOQ_1232409.xls, The quantity specified under- price bid BOQ_1232409.xls format is Qty 01 No. instead of Qty 15 nos. Kindly clarify if total price for single Qty to be inputted or Lumsum price of Total Qty for 15 nos. to be inputted as 01 lot under BOQ_1232409.xls format.	Necessary changes have made in BOQ Also, provision of PDF files of Price Bid uploading on tender website is available

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M/s. Chemtrols Industries Private Limited, Queries / request are as follows				
Sr.no.	Tender Page no.	Clause no.	Query raised by the bidder	Clarification given for the query
1.	Page no. 116	Volume – II: GCC Clause 16, SCC Clause 6.2	For all the equipment's shall be received within 180 days from the date of notification of the award and are to be installed and commissioned within 90 days from the date if the receipt of the material at site. Please accept the same.	Kindy read as: All the equipment shall be received at Continuous Ambient Air Quality Monitoring Station Sites within Ninety (90) days from the date of notification of award and are to be installed and commissioned within Thirty (30) days from date of receipt at site.
2.	Page no. 116	Volume – II: GCC Clause 16, SCC Clause 6.1	For all the equipment's delivery period for the package shall be 180 days from the date of the opening of the Letter of credit (L/C). Further transportation, to the site, installation and commissioning shall be completed by the contractor within 90 days from the date of the arrival of the equipment at port of deembarkement.	Kindly read as "Delivery Period for all the packages shall be Ninety (90) days from the from the date of notification of award . It relates to completion of delivery on CIF (designated Sea Port / Air Port) basis for equipment of foreign origin. Further transportation to the site where the MCAAQMV's is to be installed and commissioned shall be completed by the contractor within Thirty (30) days from the date of arrival of equipment at port of de- embarkment."
3	Page 120,	Volume – IV: GCC Clause 25, SCC Clause 13.2 (b)	Complete system will be delivered which is built at our factory. There are no work at site for Mobile Monitoring Vans.	MPCB will provide the tour programme of the Van. One Engineer will accompany the




			All work: Chassis building at our factory. Van will be registered in the name of MPCB. We suggest delivery challan / MPCB inspection report of Mobile Van / Chemtrols internal inspection report to be part of negotiating document of LC	van, wherever it goes. Further when the van is at stationary condition (parked at RO/SRO office, Engineer should perform the calibration and other necessary maintenance of the analysers)
4	Page 104	Volume – V: GCC Clause 25.2	The payment shall be made promptly by the Board but in no case not later than sixty (60) days after submission of invoice or claim by the contractor. Since the LC is on DP basis, this clause is not applicable.	Noted
5		Refueling charges of Vehicle towards (MCAAQMV) during operation and O&M period	Kindly clarify the refueling charges of Vehicle during operation of MCAAQMV from date of handover and during O&M period shall be in whose scope.	Refueling charges will be borne by MPCB
6		Refueling of Petrol Generator towards (MCAAQMV) during operation and O&M period	Kindly clarify the refueling of Petrol Generator during operation of MCAAQMV from date of handover and during O&M period shall be in whose scope.	Refueling charges will be borne by MPCB
7		Appointment and monthly Salary of Driver and Cleaner for Vehicle.	Please clarify appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of handover and during O&M period shall be in whose scope.	Appointment and payment of monthly Salary to Driver and Cleaner towards during operation of MCAAQMV from date of hand over and During O&M period shall be in the scope of Contractor / supplier by following all government rules and regulations
8		Electricity Charges	Kindly confirm the monthly Electricity Charges (if applicable) during operation of MCAAQMV from date of handover and during O&M period shall be in the scope of MPCB	Electricity charges (If any) will be borne by the MPCB



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Annexure – A

Technical Specifications of Body Fabrication of Mobile AAQMS Van	
Vehicle Interior	Internal system to work as environment lab. Hinged door for driver and co-driver, rear side two flap full opening doors with glass window. Glass window & frames as per original shape of Chassis, glasses of lab compartment shall be tinted half of the height with provision of curtains. Driver compartment - partition between driver compartment and lab
Flooring	Flooring Aluminium alloy checkered plate 12 mm thick to be screwed with floor frame counter sunk screws finished with vinyl sheet.
Insulation	All walls and roof shall be insulated
	External - G.I. sheets of 18 SWG Roof - G.I. sheets of 20 SWG Internal - Pre coated sheets of 22 SWG Aluminum extruded beading of suitable width (3 mm thick) will be provided Or Prebuilt Vehicle body equivalent to AC Bus
Air conditioning	Consisting of 2 Nos. air conditioning device with low noise (split air conditioning system), which can be able to maintain temperature of 22 °C while ambient temperature is 48 °C – 50 °C / Inbuilt Vehicle AC will also be considered
Ventilator	One ventilator, in the roof above the 19"-racks for fresh air
Other specifications	Van will be fabricated as per standard fabrication practice and specifications confirming to all India Motors Vehicles Act. Provision of standard fitments such as first aid box, Fire extinguishers, stepney, cradle, footsteps, toolbox, side view mirrors etc. Fire extinguishers fixed to the separating wall next to the workbench
Painting	The interior and exterior body of van will be painted first by a coat of antirust paint and further applied with white color good quality paint ICI / Dulux / DUCO /Asian paint-as per colour shades and Design approved by MPCB.
DG Set	Suitable DG sets of at least 5KVA each to be provided (02 Nos.) One DG set for powering the instruments and the other one for AC. Or Power Bank sufficient for 24 hrs analyzer & AC operations
Suspension	Compulsory Air / Pneumatic suspension
Power Cable Drum	100 mtrs- branded one for each generators





Annexure – II

Technical specifications of “AMBIENT OZONE (O₃) ANALYSER” Conforming to USEPA Automated Federal Reference Method (FRM) Designation

01	Principle	:	UV Photometric
02	Measurement	:	Ozone in Ambient Air
03	Display	:	Digital
04	Range	:	Auto ranging 0 - 500 PPB
05	Minimum Detectable Limit	:	2.0 PPB
06	Noise	:	± 1.0 PPB
07	Zero Drift	:	< ½% per month
08	Span Drift	:	< 1% per month
09	Calibration	:	With built in Zero and span generator and also see Multi-calibration section
10	Linearity	:	Continuous + 1%
11	Output Signals or Analog Output	:	3 Analog output 0 - 1 V, 0 - 10 V, 0 - 20 mA or 4 - 20 mA
12	Digital Output	:	RS 232 port/ Ethernet

Technical specifications of “5 KVA Stabilizer”

01	Installation	:	Wall mount / Table-Top
02	Display	:	Seven Segment
03	Operation	:	Automatic
04	Cabinet Material	:	Metal
05	Listing Description	:	Automatic Voltage Stabilizer Input Voltage: 90V-300V Application-5KVA/15A Mainline
06	Input Voltage Range	:	90V-300V
07	Accuracy	:	± 9 % or better
08	Other	:	<ul style="list-style-type: none">• Cut off protection• Overload-Short circuit protection• Surge protection

