

Sl.No.

/LCB

**TENDER NOTICE**

**No.C-48021/01-11/2011-12/LCB/Material**

**Dated: 03.06.2011**

**CENTRAL POLLUTION CONTROL BOARD  
'PARIVESH BHAWAN'  
C.B.D. CUM OFFICE COMPLEX  
EAST ARJUN NAGAR  
DELHI - 110 032.**

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**CENTRAL POLLUTION CONTROL BOARD**  
**(Ministry of Environment and Forests)**  
**"Parivesh Bhawan", East Arjun Nagar,**  
**Delhi – 110 032, INDIA**  
**TENDER NOTICE**  
**NO.C-48021/01-11/2011-12/LCB/MATERIAL**  
**DATED : 03.06.2011**

The Central Pollution Control Board invites Sealed Tenders from Manufacturers/Suppliers in India for the supply of instruments as listed below:

Autoclave , Biological Safety Cabinet , BOD Incubator, Container, COD Digestion Apparatus, Global Positioning System, Hot Air Oven, Incubator (Microbiological), Microwave Oven, pH meter, Vacuum Filtration assembly (Microbiology)

The Tender Documents along with detailed specifications of the instrument can be obtained from the office of the Admn. Officer (Material) Central Pollution Control Board.

Sale of tender document - From 03.06.2011 to 22.06.2011 on all working days between 11.00 pm to 5.00 pm.

Cost of tender document - Rs. 500.00 By hand ( Rs. 600.00 By Post)  
Through Demand Draft only

Earnest Money - As indicated in the Tender Document

Last date of submission - Up to 5.00 pm 23.06.2011

Date of opening of tender - At 11.00 a.m. on 24.06.2011.

The request for tender documents sent by post will be accepted Up to 15.6.2011.

Bidders using downloaded tender forms must submit separate tender fee by Demand Draft alongwith technical bid, drawn in favour of Central Pollution Control Board, Delhi.

Details of tender document, terms & conditions and Technical Specification may kindly be seen at our website [www.cpcb.nic.in](http://www.cpcb.nic.in)

(MEMBER SECRETARY)

**CENTRAL POLLUTION CONTROL BOARD  
(Ministry of Environment and Forests)  
"Parivesh Bhawan", East Arjun Nagar,  
Delhi – 110 032, INDIA  
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Autoclave , Biological Safety Cabinet , BOD Incubator, Container, COD Digestion Apparatus, Global Positioning System, Hot Air Oven, Incubator (Microbiological), Microwave Oven, pH meter, Vacuum Filtration assembly (Microbiology)

The Tender Documents along with detailed specifications of the instrument can be obtained in person on production of authority letter of the Firm from the office of the Admn. Officer (Material) Central Pollution Control Board.

The Earnest Money as indicated in Bid document must be submitted by the Bidder along with the Tender in the form of Demand Draft drawn in favour of " CENTRAL POLLUTION CONTROL BOARD" payable at Delhi

The cost of Tender Documents may be paid in Rupees by Demand Draft in favour of "Central Pollution Control Board" payable at Delhi.

Sale of tender document - From 03.06.2011 to 22.06.2011 on all working days between 11.00 pm to 5.00 pm.

Cost of tender document - Rs. 500.00 By hand ( Rs. 600.00 By Post)

Earnest Money - As indicated in the Tender Document

Last date of submission - Up to 5.00 pm 23.06.2011

Date of opening of tender - At 11.00 a.m. on 24.06.2011.

The request for tender documents sent by post will be accepted strictly Up to 15.6.2011. CPCB will not be responsible for any delay in receipt of tender document sent by post. Request received by post after above mentioned date will not be entertained at any cost.

Bidders using downloaded tender forms must submit separate tender fee by Demand Draft alongwith technical bid, drawn in favour of Central Pollution Control Board, Delhi.

Details of tender document, terms & conditions and Technical Specification may kindly be seen at our website [www.cpcb.nic.in](http://www.cpcb.nic.in)

(MEMBER SECRETARY)

COMMITTED FOR CLEAN ENVIRONMENT

## **1.0 GENERAL TERMS AND CONDITIONS**

- 1.1 This document contains the following:
- i) Copy of the Local Competitive Bidding Notice
  - ii) General Terms and Conditions of Bid
  - iii) Terms and Conditions for Submission of Bid
  - iv) Payment Terms
  - v) Settlement of Dispute
  - vi) Application Form
  - vii) Undertaking
  - viii) Bid Form
  - ix) Schedule of Earnest Money to be deposited alongwith Tender
  - x) Quantity of Instruments and Locations of delivery and installation.
  - xi) Detailed specification of the instruments.
  - xii) Check List.
- 1.2 The Tender Document is not transferable by the purchaser. The bid form in the bid form at Annexure-II may be used for bidding. Documents/forms down loaded from the net can also be used.. However, the additional sheets containing the same proforma may be used for each item. Each sheet including that provided by the Board with this document must be signed by the bidder. The price bid must be in the form provided herewith at Annexure-II.
- 1.3 The tender will not be accepted from the firm to whom the document is not issued by the Board The bid downloaded form not without tender fee will not be accepted
- 1.4 The Board takes no responsibility for delay or non receipt of Tender Document sent by post either way and also reserves the right to accept; or reject any or all the tenders in part or full without assigning any reason thereof.
- 1.5 No bid document will be sold after the last date of sale of Tender Document or between the extended period of opening date, if any.
- 1.6 The bidder is expected to examine all instructions, forms, terms and conditions and specifications mentioned in the bidding document. Failure to furnish all information required by the bidding documents or submission of a bid not substantially irresponsive to the bidding document in every respect will be at the bidder's risk and may result in the rejection of it's bid.
- 1.7 This call of tenders does not bind the Central Board to place order. The Tenders submitted in response to this invitation be rejected without assigning any reason.
- 1.8 The bidder should be a manufacturer/authorized suppliers. This tender notice, tender forms, schedule of requirements, specification etc are also available on Cpcb's Website [www.cpcb.nic.in](http://www.cpcb.nic.in). Bidders using down loaded tender form must submit a separate tender fee by Demand Draft along with the technical part of the bid. The tender without requisite tender fee will be rejected.

- 1.9 The Board at its discretion may extend the last date of submission of tender and opening of tenders. The final authority for acceptance of a Tender will rest with the Chairman, Central Pollution Control Board who does not bind himself to accept the lowest tender and is vested with the authority to reject any or all of the tenders received without assigning any reason.
- 1.10 Documents, literature, diagrams/leaflets, samples etc., enclosed in the Tender shall become the property of the Central Board without any payment.
- 1.11 The Warranty Period of the items Serial No. 02, 04, 11 will be for a period of thirty six months and for the rest of the items the warranty will be for a period of twelve months from the date of installation. Under this warranty upon the receipt of such notice supplier/agent shall within the period specified, repair/replaced the defective instrument or spare parts thereof at the ultimate destination. The supplier/agent shall take over the replaced parts/goods, in the event of any correction of defects or replacement of defective material. In such cases, the warranty for the corrected/replaced materials shall be extended till the left over period of warranty.
- 1.12 The Tender would be regarded as turned down, if no award of contract has been obtained till the expiry of the Tender validity. No separate communication will be made in this regard.
- 1.13 The items have to be supplied in standard packaging.
- 1.14 In case, the date of opening of Tender is declared as Public Holiday, the Tender shall be opened on the next working day at the same time.
- 1.15 The bid shall contain no inter lineation, erasures or overwriting words except as necessary to correct errors made by the bidder, in that case such correction shall be initialed by the person or persons signing the bid.
- 1.16 Late and delayed tenders will not be considered and shall be returned unopened to the Bidder.
- 1.17 It is advised that the outside suppliers should send the Tender through Registered Post. However, the local supplier may drop their Tenders in Tender Box kept in Central Board for the purpose. In no case Tender should be handed over to any employee of the Board.
- 1.18 Canvassing in any form will disqualify the Bid.
- 1.19 Request for the Tender Document for bidding through Telex, Telegram, Telephone, Fax, E-Mail and Tele fax shall not be entertained.
- 1.20 The Tender Notice No.C-48021/01-11/2011-12/LCB/Materials dated 03.06.2011 and item code must invariably be mentioned in the bid and for further correspondence in this regard. ( The item code number is given in the specification sheet).

- 1.21 All the Tenders should be addressed to:  
THE ADMINISTRATIVE OFFICER (M)  
CENTRAL POLLUTION CONTROL BOARD  
'PARIVESH BHAWAN'  
EAST ARJUN NAGAR, DELHI - 110 032, INDIA

## 2.0 **SUBMISSION OF BID**

- 2.1 The bid prepared by the bidder and all correspondence and documents relating to the bid exchanged by the bidder and the purchaser, shall be written in English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by English translation of its pertinent passages in such case, for the purpose of interpretation of the bid, English translation shall govern.
- 2.2 The bid must accompany Annexure-I with Techno-Commercial part of Bid, tender fee incase of down loaded Document and Annexure-II & III along with 'Price' part of the Bid duly filled in and signed by the Bidder along with the seal of the Firm.
- 2.3 The Bidders are requested to quote the rate on FOR CPCB basis including total price of instrument separately indicating the Govt. levies, and other expenditure. Bidder is expected to examine the bidding Documents carefully and are deemed to have received and read all documents. It shall be the responsibility of the bidder to request copies of any missing documents. Failure to do so will be at bidders risk.

For the authorized Indian Suppliers, supplying foreign Origin/manufactured items, they are allowed to quote in Indian Rupees on FOR destination basis. However, the Board will not enter into any Trade Agreement such as high Sea Sale/deed etc. The Concessional Custom Duty and Excise Duty Exemption certificate will be supplied. In that case, the normal custom duty applicable should be borne by the supplier. The entire responsibility/charges upto destination should be borne by the supplier. Therefore excise duty and custom duty excluded price should be quoted. Taxes, other levies, insurance, Octroi, freight etc., if any should be indicated separately, No **C/D** forms will be issued against VAT/CST

- 2.4 It may be noted that mere quoting lowest rates will not entitle any firm to get the order. The quality of the item being offered, the past performance supply etc will also be taken into consideration. Prior to award of purchase order the buyer can call any details, explanation, regarding technical & financial aspect; including demonstration of the instrument/equipment.
- 2.5 **IMPORTANT:** - BIDDER CAN QUOTE THE RATES FOR ALL THE INSTRUMENTS OR SOME OF THE INSTRUMENTS AGAINST ONE TENDER DOCUMENT. HOWEVER, SEPARATE PRICE BID AND TECHNICAL BID SHOULD BE SUBMITTED FOR EACH ITEM CLEARLY MENTIONING THE ITEM CODE NUMBER, ITEM NAME ON THE TOP OF THE ENVELOPES WITH SENDERS NAME AND ADDRESS. THE CENTRAL POLLUTION CONTROL BOARD RESERVES THE RIGHT TO ACCEPT THE TENDER IN FULL OR IN PART. THE BID FOR EACH ITEM SHOULD BE IN SEPARATE SHEETS/PAGES AND FOR THE SAKE OF IDENTITY, COMPILATION, INSTRUMENT/ITEM CODE NUMBER AND DESCRIPTION OF ITEM SHOULD BE WRITTEN ON THE TOP OF EACH BID. EMD SHOULD SUBMIT SEPARATELY AGAINST



EACH ITEM. ITEMS-WISE TECHNICAL SPECIFICATION AND PRICE SHOULD BE IN SEPARATE SHEETS i.e. THERE SHOULD BE SEPARATE ENVELOPE FOR EACH ITEMS CONTAINING TECHNICAL, PRICE BID & ITEMS WISE EMD, INCASE, BIDDERS DESIRES TO QUOTE MORE THAN ONE ITEM.

- 2.6 The Tender is to be submitted "single stage-3 envelope system" i.e. the first sealed envelope will contain the earnest money, second sealed envelope will contain full information required to judge pre-qualification, complete details and specification of the instruments offered including the leaflets and catalogues, list of credentials with documentary evidence i.e., purchase/work order etc., Income Tax Clearance Certificate, PAN Number, VAT/Sales Tax Registration No., Affidavit for not being black listed, Commercial Terms & Conditions etc. It shall be marked "**Pre-qualifications, technical and commercial Bid** No.C-48021/01-11 /LCB/2011-12/Mat. dated 03.06.2011 due on 24.06.2011 for Laboratory Instrument/Equipments. The third envelope will contain only price quoted by the bidder in the form given at **Annexure -II** of this document and shall be clearly marked "Price Bid No.C-48021/01-11/2011-12/LCB/Materials dated 03.06.2011 due on 24.06.2011 for Laboratory Instrument/Equipment. All the above envelopes must be separately sealed and shall be kept in one envelope bearing the address of Central Pollution Control Board and super- scribed with bold letter "**TENDER FOR LABORATORY INSTRUMENT/EQUIPMENT. - NOT TO OPEN BEFORE 24.06.2011 AT 11.00 A.M.** The senders address should be mentioned in all the envelopes.
- 2.7 Technical & Commercial part of the tender will be opened on due date i.e. at 11.00 A.M. on 24-06-2011 in the office of the Central Board, in presence of the Representative of the Tenders who like to present. Sealed Price part of technically and commercially acceptable tenders will be opened on a later day which will be communicated by the Board on the same day or on a later date.
- 2.8 The bidder shall pay as Earnest Money shown against each item mentioned in the tender document at Annexure. Tender which is not accompanied by earnest money will not be considered . Unsuccessful bidders bid security will be discharged/retuned without any interest in the same form after the concerned purchase is finalized or within Three months whichever is earlier and that of successful bidders will be discharged without interest within one month of the successful installation and commissioning of the instrument and on furnishing the performance Bank Guarantee/Security
- 2.9 The List of Instruments/Equipments their approximate quantity and point of delivery/installation is given at annexure-V and the detailed specification of the Instruments are given in the tender documents (Page 16-33 ). The quantity mentioned in the tender document may be increased/decreased at the discretion of the Competent Authority in the Central Board without assigning any reason.
- 2.10 The bid security shall be in the form of Demand Draft only in favour of "CENTRAL POLLUTION CONTROL BOARD" payable at DELHI. No Earnest Money shall be accepted in any form. The Earnest Money shall be forfeited if a bidder withdraws or amends the tender in any respect within the period of validity of this tender or fails to supply the instruments within the specified period in the tender document. Tender shall not entertained where a Tenderer has not furnished adequate earnest money in the

Prescribed and Acceptable Form. In case the instrument supplied is found defective and not attended by the supplier, the Earnest Money deposited by the supplier will also be forfeited.

- 2.11 The Firm who seek exemption from depositing earnest money being small scale industry or being registered with NSIC , DGS&D and other Government agencies which entitles them for exemption must submit the valid Registration Certificate cover the instrument offered by them along with the permissible value. The copy of Government Notification granting exemption from deposit of EMD must be submitted along with the techno-commercial part of tender along with the bid. (EMD Exemption will be granted only to those items specified in the certificate of Registration).
- 2.12 Unsuccessful bidders bid security will be discharged/ returned without any interest in the same form after the concerned purchase is finalized or within three months whichever is earlier and that of successful bidders will be discharged without interest within one month of the successful installation the instrument.
- 2.10 The validity of Tender would be for a minimum period of 180 days from the date of opening of Tenders. A Bid valid for a shorter period may be rejected by the Board as non responsive. In extension cases, the Board may solicit the Bidder's consent to an extension on the period of validity and the bid shall remain valid for the extended period mutually agreed for.
- 2.11 The rates should be quoted both in words and figures.
- 2.12 Arithmetical error will be rectified on the following basis:- If there is discrepancy between the unit price and total price that is obtained by the multiplying the Unit Price and quantity, the unit price shall prevail and the total price shall be corrected. If there is discrepancy between words and figures, the amount mentioned in words will prevail.
- 2.13 Tenders not in proper sealed cover or received tele-graphically /E-mail/Fax will not be entertained.
- 2.14 Conditional Tenders will be rejected without assigning any reason.
- 2.15 The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person duly authorized to the Contract. The letter of authorization should bear the signatures of only the authorized person of the firm. All pages of the Bid, except for un-amended printed literature shall be initial by the person or persons signing the bid.
- 2.16 To assist in the examination, evaluation and comparison of bids the buyer may, at its discretion, ask the Bidder for a clarification of its bid. However, no change in the price or substance of the bid shall be sought, offered, re-permitted.
- 2.17 Eventual suggestions for modification or subsidiary Tenders are principally not admissible.
- 2.18 The Bidder are requested to submit Bid only if their offer strictly comply to these specifications. Please note that no deviation in the required specification will be

permitted. The bidding for the instruments having different specification will be on Bidder's risk as the Board will not entertain such Bids. BIDS CARRYING THE STATEMENT LIKE "SPECIFICATION AS PER TENDER DOCUMENT" SHALL NOT BE ENTERTAINED. THE PRODUCT SPECIFICATIONS SUPPORTED BY TECHNICAL LITERATURE AND LIST OF USERS, MUST BE ENCLOSED.

- 2.19 The placement of work order/purchase order will be according to technical evaluation of the Tender and after consideration of its price worthiness.
- 2.20 The price to be given in the Tender are fixed prices, irrespective of rise in Materials prices and increase in taxes etc., till complete the delivery of items . No request in regard to increase in the price of instruments or in taxes etc., will be entertained after the submission of the tender.

Bidder is expected to examine the bidding Documents carefully and are deemed to have received and read all documents. It shall be the responsibility of the bidder to request copies of any missing documents. Failure to do so will be at bidders risk.

It may be noted that mere quoting lowest rates will not entitle any firm to get the order. The quality of the item being offered, the past performance supply etc will also be taken in to consideration. Prior to award of purchase order the buyer can call any details. Explanation, regarding technical & financial aspect.

- 2.21 **The supplier should attach a copy of financial bid/Proforma Invoice of the Equipment quoted (without cost/price figures) along with the technical bid to assess the item/components quoted in the bid.**
- 2.22 The nomenclature of the instruments and spares will be invariably same in Proforma Invoice, Invoice, Packing list and in other relevant papers incase the Bidder is asked to supply the instruments against its offer.
- 2.23 With the submission of the Tender, the Bidder accepts the conditions of the Tender.
- 2.24 The installation of the instruments is the entire responsibility of the supplier. It must be done either by the principal/supplier or their authorized agents within one month of the receipt of the instruments by the Board. The supplier or Agent should be in touch with the Materials Section of the Board to know the exact day of receipt of stores supplied/dispatched by them.
- 2.25 Each and every folio of the Tender must be signed by the Bidder.
- 2.26 Bidder can quote the rates for all the instruments or some of the instruments. The Bid shall be considered only for those instruments for which the rates have been specifically quoted. The Board further reserves the right to accept the Tender for all the instruments or some of the instruments for which the bidder has quoted the Bid. The bidder should attach a separate list for the consumable/spares required for smooth operation of the instrument at least for three years( as optional items) and two copies of trouble shooting manuals, electric circuits etc. along with the bids.

2.27 The bidder should provide the complete list of spares and consumables required for operation and maintenance of the instruments along with the price list.

**2.28 Annual maintenance contract:**

The bidder should quote the charges for annual maintenance contract after the warranty period for the instrument listed in annexure IV of this tender document at serial numbers 2, 4 & 11 .

2.29. The instrument for which Tenders are invited will have to be supplied within 30 days from the date of issue of purchase order. in the case of non-observance of the delivery period , the order will be cancelled.

2.30 The after sales service is most important to be considered for comparison bids .The firms who do not have local Agents to provide after sales and service during warranty period will not be considered.

**2.31 In the case of proprietary item, the proprietary certificate issued by the principal/manufacturer should be attach along with the technical bid. In that case, the bid of the manufacturer /their sole distributor will only be considered. A copy of the latest supply order (showing details of price) executed to any Ministries Departments under Govt of India should be attached along with the price bid.**

2.32 If the instrument supplied is found defective/unsatisfactory condition/short supply/other than specifications in the Purchase Orders, the same will have to be replaced at the suppliers risk and cost. No freight and other charges for replacement will be paid by the Board.

2.33 At any time prior to the deadline for submission of bids the buyer may for any reason whether at it's own initiate or in response to a clarification requested by a prospective Bidder, modify the bidding documents by an amendment.

2.34 The Amendment if any, will be brought to the notice in writing or by fax or cable to all concerned Bidders who have purchased the bidding documents and will be binding on them.

2.35 In order to afford prospective Bidder reasonable time in which to take the Amendment into account in preparing their bids, the purchaser may at its discretion, extend the deadline for the submission of bids.

2.36 The prices must be quoted item-wise i.e. basic price, taxes, packing forwarding, handling and installation charges etc. The charges must be quoted clearly and not in vague terms like "As Actual" "Approx" etc.

2.37 If according to the Bidder, the Tendered Documents contain unclear points which could influence price calculations, the bidder has to inform the authority who is issuing the call of Tenders before submission of his Tender, either in writing or by fax even if he has pointed out this earlier in any other form/reference.

- 2.38 The Packing, Forwarding, Insurance, Transportation & Installation including training charges if any must be quoted separately for each item according to the place of delivery as mentioned in the schedule at Annexure-V. The supplier will be held liable for any damage, theft or loss during transit. The instruments are to be dispatched to the respective places directly and to be installed there by the supplier under intimation to the, CPCB Office at Parivesh Bhawan, Delhi-32. The prices should be quoted FOR CPCB/designated location mentioned in annexure-V.
- 2.39 The warranty/guarantee of the instrument/equipment should be clearly mentioned in the Bid.
- 2.40 Prior to placing purchase order, in case the buyer desires to inspect the stores/instrument equipment including demonstration should be arranged by the supplier in the premises of the Central Board on free of charges.

#### **2.41 MOST IMPORTANT**

**PLEASE NOTE THAT ANNEXURE-I OF THIS DOCUMENT MUST BE ENCLOSED WITH THE FIRST PART OF BID i.e. "TECHNICAL/COMMERCIAL BID AND TENDER FEE (IN THE CASE OF DOWNLOADED DOCUMENT" AND ANNEXURE-II AND III WILL BE KEPT IN THE SECOND PART OF BID i.e. PRICE BID.**

**In case of foreign manufactured item supplying by the Indian Supplier/representative firm in India; such firm should have minimum two year continuous agency/partnership/ joint venture/ participation or collaboration with their principal foreign supplier. The documentary proof of such agency ship/authorization/MOU should submit alongwith the technical part. The bid of the firm does not contain the proof of such nomination/authorization as Indian supplier/representative will be rejected. The case quoted imported item, The price should be mentioned in Indian Rupees on FOR destination basis.**

#### **3.0 PAYMENT CONDITIONS**

- 3.1 100% payment will released on supply and installation of the systems, on good and satisfactory condition and furnishing performance security/performance Bank Guarantee equivalent to 10% of the purchase order value till warranty period. The Performance Security in the shape of Bank Guarantee be furnished by the principal supplier or their authorized agent from any Nationalized Bank. No Proposal for advance payment will be allowed in any case. Proposal for Advance payment, document and payment through bank will not be considered. Hence no preference will be given for such advance payment proposals.

#### **4.0 SETTLEMENT OF DISPUTE, ARBITRATION**

- 4.1 All disputes or difference arising out of or in connection with the contract and supply of any item/equipment assigned under the same (whether during the progress of the works or after their completion, determination, abandonment or breach of the contract) shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The Arbitral Tribunal shall consists of three (3) arbitrators appointed by the Chairman, Central Pollution Control Board. The arbitrators shall elect an umpire among them. In case of

failure of the two arbitrator appointed, to reach upon a consensus, the decision of the umpire shall be final and binding. It will not be an objection to any such appointment that the arbitrators are the Government Servants and had any interest in the Board or the contract entered into directly or indirectly. In all cases, the arbitrator shall state their decision in writing of an amount of claim in dispute is Rs.50,000/- and above, subject as aforesaid the provision of the Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. Arbitration proceeding shall be held at Delhi/New Delhi, India. The Cost and expenses of Arbitration proceedings will be paid as determined by the Arbitral Tribunal.

ii) It is a term of the contract that the party invoking the arbitration shall specify the dispute or disputes to be referred to the arbitration under this clause together with the amount or amount claimed in respect of each such dispute.

iii) It is also a term of the contract that if the supplier (s) do not make any demand for arbitration in respect of any claim (s) or dispute in writing within 90 days of submission of the final bill for payment, the claim of the supplier will be deemed to have been waived and absolutely barred and the Board will be discharged and released of all liabilities under the contract in respect of these claims.

iv) The decision of CPCB regarding the quantum of reduction as well as justification thereof in respect of rates for sub-standard work, will be final and would not be open to arbitration. Provided always that no compensation shall be payable for any loss in consequence of hostilities or war-like operation(a) unless the supplier had taken all such precautions against Air raid as are deemed necessary By A.R.P. officers of the Engineer-Incharge, (b) for any materials etc., no on the site of work or for any tools and plant, machinery, scaffolding, temporary building and other things not intended for the work.

v) In the event of the supplier having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as considered reasonable by CPCB. Compliance within such time as CPCB may prescribe in that behalf and in the event of the supplier failing to effect such compliance within the time prescribed by CPCB then CPCB shall without prejudice to his other rights be entitled to withhold from the amount payable to the contractor any amount payable to the workmen under any such laws, regulations or rules and to make payment thereof to the workmen. The CPCB shall also have in that event the right to terminate the contract with immediate effect and to exercise powers reserved to their employer under the contract as a result of termination.

#### 4.1 **LAWS AND REGULATIONS**

The formation, validity and performance of this Contract shall be governed as to all matters by and under the laws and regulations of India and courts of Delhi shall have exclusive jurisdiction in all matters arising under this Contract.

The Supplier shall respect and abide by all laws and regulations of India and shall make its best effort to ensure that the personnel of the Supplier and their dependents, while staying in India, shall respect and abide by all laws and regulation of India.

The Supplier shall protect, absolve and indemnify the Board, and their representatives from any claim, loss or damage arising from any non compliance alleged or proved, without claiming them for payment

## **5.0 FORCE MAJEURE**

Vendor shall not be considered in default if delay in delivery occurs due to causes beyond his control such as acts of God, natural calamities, civil, wars, strikes, fire frost, floods, riots and acts of usurped power. Only those causes which have a duration of more than 7 calender days shall be considered cause of force majeure. A notification to this effect duly certified by the Local Chamber of Commerce/Statutory Authorities shall be given by the Vendor to the owner by registered letter. In the event of delay due to such cases a length of time equal to the period of force majeure or at the option of the owner the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of owner. In the event of such cancellation the vendor shall refund any amount advanced or period to the vendor by the Purchaser and delivery back any material issued to him by the Purchaser and release facilities, if any, provided by the Purchaser.

S.No. /LCB

**APPLICATION FORM**

(To be filled by the bidder)

- 1) Name and full address of the Bidder including Telegraphic Address/Telex No. and Fax No. :
- 2) Name and Designation of the Head of the Firm/supplier and his Telephone No. :
- 3)
  - i) In case the supplier is located out of Delhi; specify the Address/Authorised Distributor's or Agent's Address in Delhi, if any. :
  - ii) Name, Designation,Address : Telephone & Fax Numbers of the Authorised Person who may be contacted during the process of the purchase concerned under this document (Applicable for all the suppliers)
- 3) Item Code Number(s) & description of item quoted for. :
- 4) Whether Earnest Money Deposited : (Amount: Rs.
- 5) If yes,Demand Draft No, Date and Name of issuing Bank. :
- 6) Validity of Tender :
- 7) If the tender documents are accepted in full (Yes or No) :
- 8) Income Tax Clearance Certificate attached (Latest) (Yes or No) with PAN Number. :

Place:

Date :

Legally Binding Signature with stamp



**BID FORM****No. /LCB**

Details showing quantity, specification and other details of the instruments offered (to be filled by the bidder and must be kept in "Price Bid" part of the Tender)

Sl.No and Item code Number of instruments as per our tender Document	Name of Instrument	The Specification offered by the Bidder	Difference in Specifications of tender document and that of Bid, if any	Quantity	Unit Price (in Rupees excluding rates at col. no. 7)	Taxes and other expenditures (Sales Tax, C.S.T, freight, cost of installation & tranning (in case of indigenous items)etc.	Total Amount in Rupees FOR CPCB/ Locations
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

NOTE:- If this sheet is not sufficient to accommodate the bid the additional sheets containing the same proforma but all such sheets including this one must be signed by the Bidder along with the seal. This Annexure must enclose in the Proforma Invoice price bid for item wise. Separate Bid form should be attached against each item, quoted for.

Section Officer (Material)

Signature with date &amp; stamp of the bidder

**UNDERTAKING**

DATE \_\_\_\_\_  
TENDER NOTICE NO. \_\_\_\_\_

TO

THE CHAIRMAN  
CENTRAL POLLUTION CONTROL BOARD  
(MINISTRY OF ENVIRONMENT & FORESTS GOVERNMENT OF INDIA)  
C.B.D. CUM OFFICE COMPLEX  
EAST ARJUN NAGAR DELHI - 110 032.

Sir,

Having examined the conditions of Tender Document and specifications of the instruments, the receipt of which is hereby acknowledged. We, the undersigned, offer to supply, delivery and install the following:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 8.
- 9.
- 10.
- 11.
- 12.
- 13

(Please add additional pages, if required)The above supply, installation shall be in conformity with the specifications and conditions of supply .

We undertake if our bid is accepted to deliver the instruments quoted by us, we shall deliver and install within the period indicated by us in our offer.

We agree to abide by this bid for a period of 120 days from the date fixed for Bid opening and it shall remain binding upon us and may be accepted at any time before expiration of that period.

We are submitting a Demand Draft for Rs.....in favour of "Central Pollution Control Board", Delhi towards the Earnest Money.

This Bid, together with your written acceptance thereof in your notification of award shall constitute a bidding contract between us.

We understood that you are not bound to accept the lowest or any bid you may receive.

Dated this.....day of.....2011

Signature of authorized Person, Name with Stamp & full Address.

**SCHEDULE OF EARNEST MONEY**

<b>Sl. No.</b>	<b>Item Code No.</b>	<b>Name of the Instrument / equipment name</b>	<b>Qty.</b>	<b>EMD (in Rs.)</b>
1.	01	Autoclave (Vertical Sterilizer)	05	37,500=00
2.	02	Biological Safety Cabinet (Vertical)	05	2,50,000=00
3.	03.	BOD Incubator	04	10,000=00
4.	04	Container for CAAQM Station	02	1,00,000=00
5.	05	COD Digestion Apparatus	04	10,000=00
6.	06	Global Positioning System (GPS)	40	40,000=00
7.	07	Hot Air Oven	09	18,000=00
8.	08	Incubator (Microbiological)	05	50,000=00
9.	09	Microwave Oven	05	12,500=00
10	10.	pH Meter	06	9,000=00
11.	11	Vacuum Filtration Assembly (Microbiology)	05	2,50,000=00

## Annexure-V

**LOCATION OF DELIVERY AND INSTALLATION OF  
INSTRUMENTS/EQUIPMENT**

<b>Sl. No.</b>	<b>Item Code No.</b>	<b>Name of the Instrument / equipment name</b>	<b>Qty.</b>	<b>Place of delivery / installation</b>
1.	01	Autoclave (Vertical Sterilizer)	05	Delhi/Lucknow/Kanpur/ Dehradun/Allahabad/ Varanasi/ Patna / Kolkata (any five places)
2.	02	Biological Safety Cabinet (Vertical)	05	Delhi/Lucknow/ Dehradun/ Patna/Kolkata
3.	03.	BOD Incubator	04	Delhi/Lucknow/Kanpur/ Dehradun/Allahabad/ Varanasi/ Patna / Kolkata (any 04 places)
4.	04	Container for CAAQM Station	02	Delhi/New Delhi
5.	05	COD Digestion Apparatus	04	Delhi/Lucknow/Kanpur/ Dehradun/Allahabad/ Varanasi/ Patna / Kolkata (any 04 places)
6.	06	Global Positioning System (GPS)	40	Delhi
7	07	Hot Air Oven	09	Delhi/Lucknow/Kanpur/ Dehradun/Allahabad/ Varanasi/ Patna / Kolkata
8.	08	Incubator (Microbiological)	05	Delhi/Lucknow/ Dehradun/ Patna/Kolkata
9.	09	Microwave Oven	05	Delhi/Lucknow/ Dehradun/ Patna/Kolkata
10	10.	pH Meter	06	Delhi/Lucknow/Kanpur/ Dehradun/Allahabad/ Varanasi/ Patna / Kolkata (any 06 places)
11.	11	Vacuum Filtration Assembly (Microbiology)	05	Delhi/Lucknow/ Dehradun/ Patna/Kolkata

**Autoclave (Vertical Sterilizer)**

- Microprocessor controlled vertical autoclave
- Capacity : Different capacity upto 150 Liters starting from 40 liters
- Microprocessor based temperature control with digital display
- Timer function
- Analog pressure display/ pressure gauge
- Safety valve and pressure release valve
- High quality electric heater
- Sturdy construction of inner chamber with high quality stainless steel
- Insulated outer chamber
- Top loading design with effortless locking system
- High quality silicone door gasket/ o-ring
- Water level indicator
- Low water cut off system
- Stainless steel/ aluminium carrier basket
- Auto draining facility for reservoir tank water
- Alarm system after completion of command
- Pressure range  $1.1 \text{ kg/ cm}^2 - 2.2\text{kg/ cm}^2$
- Temperature range  $121^\circ \text{C} - 138^\circ \text{C}$
- Confirms electrical safety standards IEC-60601/IS-13450 (BIS)
- Should have calibration and inspection certificate from factory
- Power supply Ac 220/ 240 V, 50Hz
- Warranty : 3 years
- Temperature & Pressure controller to be certified by a NABL recognized Laboratory.

**Biological Safety Cabinet (Vertical)**

1. The biological safety cabinet to utilize DC motor technology to ensure lower levels of energy consumption and heat emission.
2. The motor should automatically adjust the airflow speed without the use of a damper to ensure continuous safe working conditions, even without maintenance adjustments.
3. The usable work area of the cabinet interior must be greater than 0.56 m<sup>2</sup> for a standard 1.2 m wide cabinet, and greater than 0.84 m<sup>2</sup> for a 1.8 m wide cabinet.
4. The UV light must be programmable to shut off automatically. The settings must allow the user to program the timer in one hour increments, from 0 to 24 hours.
5. All filters and components of the plenum and blower motor assembly must be accessible front to front to allow for easier servicing and maintenance of the cabinet over its lifetime.
6. The overall cabinet height must be lower than 2200 mm to ensure proper airflow clearances for long-term cabinet reliability.
7. The front window sash must be angled 10° to help minimize glare on the window to the user, and to ensure that the user's posture is comfortable during a working session. Inadequate user ergonomics in a safety cabinet may lead to unsafe working habits and harmful consequences to user safety or product contamination. The window door should be poly carbonated Tough headed glass.
8. The cabinet noise level should be less than 55 dB (A) for a 1.2 m cabinet and less than 57 dB (A) for a 1.8 m cabinet as measured in a sound proof room.
9. The microprocessor controller must be located on a slanted front panel so it is easy to see from a seated working position in front of the cabinet.

10. The microprocessor must display the inflow and down flow air velocities in real-time on an LED display to ensure the user knows whether or not the cabinet is working under safe operating conditions.
11. The microprocessor must display the number of hours of use on the HEPA filter to ensure user knows when to replace the HEPA filters to achieve safe working conditions.
12. The interior of the front window must be accessible for cleaning without requiring the user to manually hold the window.
13. All interior and exterior parts must be smoothed during the manufacturing process to ensure no risk of cuts to users or maintenance personnel.
14. The drain pan beneath the work surface must be negatively pressurized to ensure that any contaminants are quickly trapped and pushed into the HEPA filters.
15. Specially suited for wet processing, water job, chemical work, critical biological work involving virus and pathogens and for microbiology, bio-chemistry etc.
16. Integral powerful exhaust system. Built in positive air curtain effect to prevent inside air from going out and room air from entering in providing total process and operator safety
17. Exhaust ducting to carry the air outside.
18. Main body and table top should be sturdy/ Heavy gauge.
19. Cleanliness level should be less than 3.5 participating ltr. of 0.5  $\mu\text{m}$  and larger (15014644-1)
20. Vibration-level : less than 2.3 $\mu\text{m}$ .
21. Should have fluorescent light be and withstand large voltage fluctuation
22. Hepa filter should be MINIPLEAT with 99.99% efficiency for 0.3 micron.

23. Installation, validation/ performance demonstration should be carried out at site with ultra modern facilities like velocity like test based partially test etc.
24. Three years warranty from the date of installation inclusive of one year spare replacements, if any.
25. AMC cost for five years after warranty period be mentioned.



**B.O.D. INCUBATOR**

- Material** : Triple walled construction with :
- \* Outer Body made of Mild Steel painted with white Powder coated enamel.
  - \* Inner Chamber made of Stainless Steel with ribs for adjusting perforated shelves at convenient height.
  - \* Three adjustable Perforated Shelves (S.S.) will be provided.
  - \* Full view inner Glass door with Aluminium Frame closes on a resilient gasket and permits inspection of the specimens, without disturbing the thermal conditions of the chamber.
  - \* Cooling Unit is placed on heavy duty Iron angle Frame below the Chamber with Castor wheel for Movability.
  - \* Door with Magnetic Gasket with Lock & Key arrangement.
  - \* Illumination Lamp (15 W) will be provided inside the Chamber.

**Insulation** : 75 mm. gap between the walls is filled with high grade super fine mineral glass wool for proper insulation and to avoid thermal loss.

**Temp. Range** : 5 - 60 °C, with an accuracy of  $\pm 0.2$  °C or better.

**Temp. Contr.** : Temperature is controlled by LCD Display PID based Digital Temperature Controller cum Indicator with pt-100 sensor with Time/Date display.

**Cooling** : Hermetically sealed, high performance CFC Free Compressor (Emerson) with its protective device works efficiently to cool the chamber. Cooling coils are distributed evenly & lie in the air circulation path.

**Heating** : Fins Type Heating elements (ISI Marked) are placed in the path of moving air duly insulated from sheet body.

**Blower** : Air is circulated by a couple of self cooling Motor with fans to keep the temperature uniform throughout the inner chamber.

**Recorder** : In built Temperature recorder with USB port for downloading the data on to computer. Data display in table and graph format.

**Panel** : Panel is located at the top of the Instruments.

- \* ON/OFF switch.
- \* Digital Temperature Controller cum Indicator.
- \* Cooling, Heating, Humidity & Main Indicator.

\* Supplied complete with Voltage Stabilizer, Instruction manual etc. To operate on 220 V, 1 phase, 50 Hz, AC supply.

To be provided with NABL Accredited Lab. Calibration Certificate for Temperature control of B.O.D.INCUBATOR.

**Container for CAAQM Station**

**TECHNICAL SPECIFICATIONS**

**1.0 MONITORINGS STATION**

**01. Monitoring Station:** is designed for housing the ambient air quality monitoring 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 analysers are easily accessible from front & back for calibration and maintenance.

**02. Dimensions:**            Inside length: Approx. 4200 mm  
                                      Inside width: Approx. 3500 mm  
                                      Inside height: Approx. 2500 mm

**03. 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 pre-coated MS Sheet of approved colour shade. All other steel parts should be hot dipped galvanized having minimum rate of galvanisation of 275 gram per square meter. All joints of like metal such as steel-to-steel or aluminium-to-aluminium shall be protected against corrosion by 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.

**04. Paneling:** The outer paneling will be of 1.6 mm of Pre-coated MS sheet to withstand external impacts and abrasions. Outer side of the MS Sheet i.e. 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 suitable pre-coating of minimum 7 micron off-white colour. The inner paneling 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

**05. Floor:** The floor will be laid in frame of 600 x 600 mm centre to centre with 50 x50 x 6 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.

**06. Outdoor:** One door of size approx. 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.

**07. Electric Power Supply Box:** Three - phase (3 Ø) electrical wiring will be laid in ducts. Copper wiring of 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 Nos. Emergency cut off switch & Thermostat switch (35 °C) for power disconnection, 6 free sockets and 3 fluorescent lamps for lighting will be provided. The station shall be properly grounded atleast on 2 corners (diametrically opposite). One three phase energy meter (Digital Type) shall be installed. Weatherproof cubicles / enclosure for housing of MCB / TP & N Switch of main power termination (out side shelter) weatherproof telephone junction box for terminations of telephone line are to be provided.

**Option:** Proper earthing for telescopic mast of meteorological system shall be provided, if supplied along-with the station. There should be conduction between the telescopic mast of the meteorological system and the station. The guy ropes shall be provided for supporting the mast.

**List of Consumables:**

All Fuses	:	02 set
Lightning arrestor	:	02 set
Emergency Switch	:	02 pcs
Thermostat	:	01 pc

**08. The housing** will be partitioned as per 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 atleast 06 gas bottles should be provided.

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 pre-coated MS sheet (same as monitoring station) with supporting arrangements. AC unit's external piping shall be placed in GI trays. Cable trays fixed on exterior wall shall be covered with pre-coated MS sheet, of same colour shade of monitoring station. Roof top sheet to be levelled and sloped properly. Rain water spout shall be fixed at top with rain water down corner pipe.

**09. Station Furnishing:**

- (i) 19" racks – 3 Nos.
- (ii) Fire extinguishers – 2 Nos.
- (iii) Furniture:
  - a) Material - Furniture made of water resistant laminated board
  - b) Cupboard – As per drawing
  - c) Working table – Powdered coated MS frame size 1400 x 900 x 750 mm (w x d x h) and top 19 mm thickness Board
  - d) Revolving tilting chair – 2 Nos.
- (iv) Miscellaneous
  - a) The exhaust gases from the analyser should be collected and vented by a common exhaust pipe.

- b) Folding aluminium ladder for roof access
- c) Thermostat for controlling the temperature of the station
- d) Hygro Meter for measurement of Humidity inside the station
- e) Mounting bracket for the ladder
- f) No smoking stickers

## 2.0 AIR CONDITIONER

- a. Type: 2 Nos. split type roof mounted, energy efficient (minimum 4 star rating) operated alternately by an automatic timer.
- b. Capacity: 2.0 Ton
- c. Nominal Cooling: Btu /hr – 24000, Kcal / hr: 6000
- d. Fan type: Propeller Fan
- e. Fan Motor type: Permanent Split Capacitor, 1/8 Horse power
- f. Control Type: Remote
- g. Compressor: Reciprocating / Rotating
- h. Refrigerant: Eco friendly
- i. Power supply: 230 volts  $\pm$  10 volts AC and 50 Hz  $\pm$  3%.

## 3.0 ON LINE UNINTERRUPTIBLE POWER SUPPLY (UPS)

Three phase 15 kVA UPS along with Automatic Delayed Restoration Device (ADRD) with 4 hours backup in full capacity should be provided for the smooth operation of the station along with Air Conditioners.

01.	Capacity	:	15.0 kVA
02.	Technology	:	PWM using IGBT / MOSFETS
03.	Crest Factor	:	More than 3: 1
04.	Input	:	
	Voltage	:	415 V AC
	Voltage Range	:	$\pm$ 25%
05.	Output	:	
	Voltage	:	415 V AC
	Voltage regulation	:	$\pm$ 1%
	Frequency	:	50 Hz $\pm$ 3%
06.	Battery	:	
	Battery type	:	Sealed maintenance free
	Back up time	:	4 Hrs. (Full load)
	Battery Capacity	:	Depends upon backup time
	Recharge time	:	5 hrs to 90% after complete discharge
07.	Distortion	:	Less than 1% on linear load
08.	Power factor	:	0.8 to 1
09.	Indicator	:	L.E.D. – Battery Charge, load level, on Line, over load, on battery, replace battery
10.	Alarm	:	Audible alarm for battery back up, battery low, and fault
11.	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
12.	Overload Capacity	:	110% for continuous load
13.	Efficiency	:	More than 90%

- |     |                 |                       |   |                                                                      |
|-----|-----------------|-----------------------|---|----------------------------------------------------------------------|
| 14. | Environment     | Operating Temperature | : | 0 – 50 ° C                                                           |
|     |                 | Operating Humidity    | : | 10% to 95% (Non condensing)                                          |
|     |                 | Audible Noise         | : | Less than 45 db (at 1 meter)                                         |
| 15. | Size            |                       | : | Not exceeding 1000 x 1000 x 1000 mm                                  |
| 16. | Warranty Period |                       | : | Three years.<br>AMC cost for five years after warranty be mentioned. |

#### **4.0 SPECIFICATIONS OF SAMPLING SYSTEM**

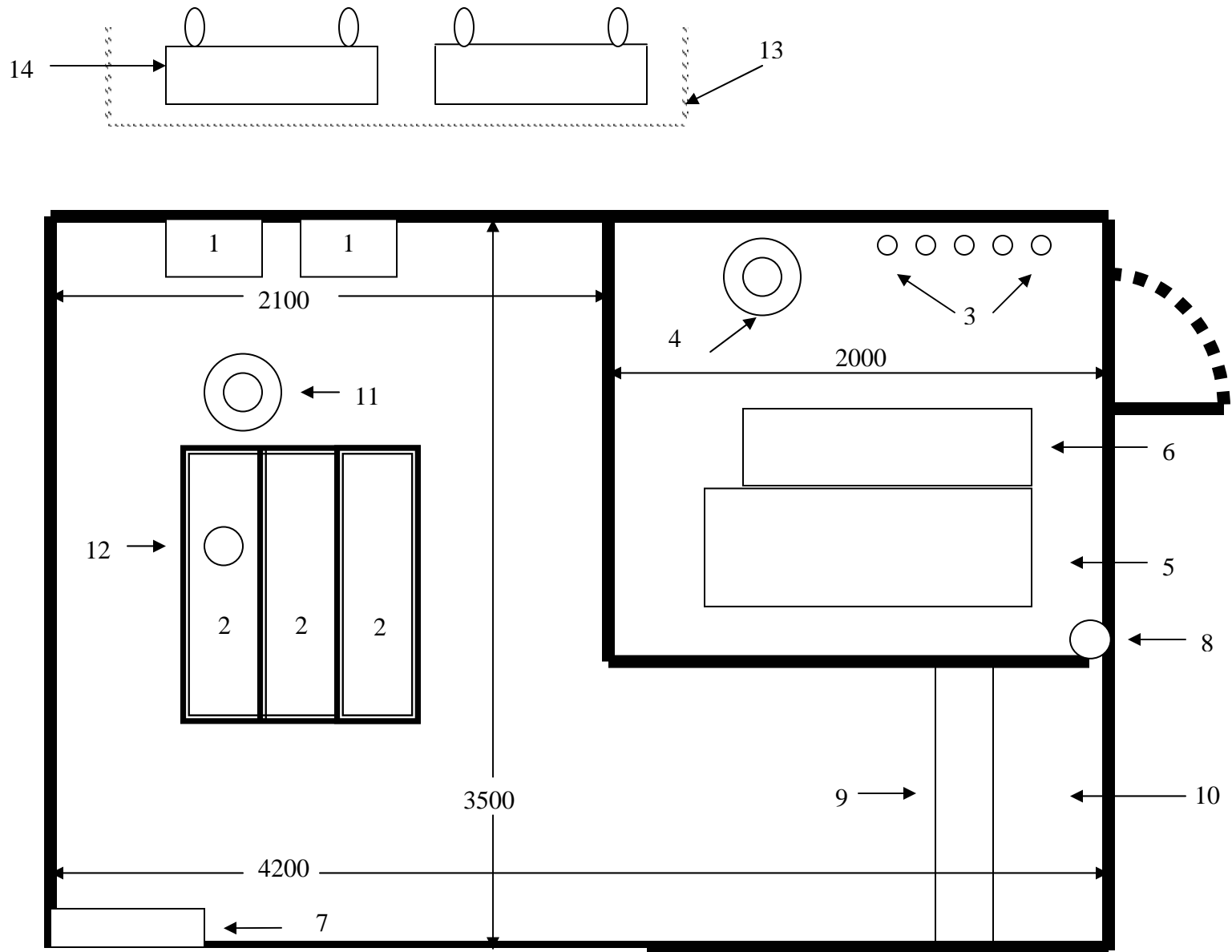
A suitable sampling system as specified by USEPA having 10 ports manifold and fitted with a suction pump to draw ambient air. System duly equipped with moisture removal systems should be provided for sampling of ambient air separately for gaseous and dust measurement.

Gases sampling system:

- |    |                               |   |                                                |
|----|-------------------------------|---|------------------------------------------------|
| a) | Height of the sampling system | : | Approx. 1.0 meter above the roof               |
| a) | Roof entry cut out            | : | Stainless Steel                                |
| b) | Conduit                       | : | Stainless Steel                                |
| c) | Inner sampling system         | : | Borosilicate glass                             |
| d) | Sampling head                 | : | Stainless Steel                                |
| e) | Manifold                      | : | 10 port for tubes 6 x 1 mm,<br>self-tightening |

#### **5.0 SPECIFICATIONS OF 19" 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 included in 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. All nuts and bolts shall be cadmium coated.

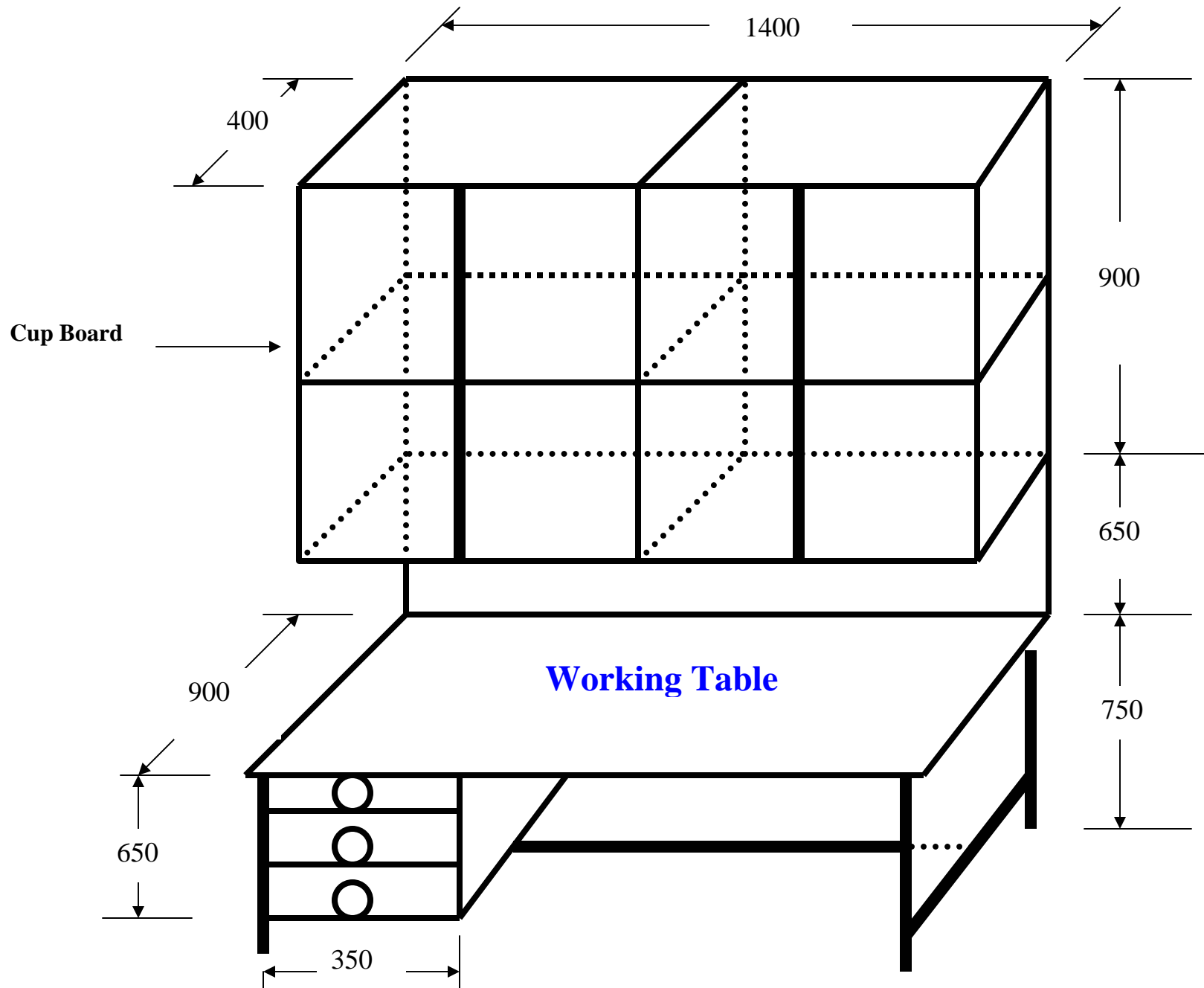


- 1. Roof Mounted Split AC
- 2. 19" Rack
- 3. Gas Bottles
- 4. Mast for Meteorological Sensors
- 5. Battery Box for UPS
- 6. UPS Unit
- 7. Electric supply Box
- 8. Exhaust fan
- 9. Working Table
- 10. Racks for spare parts
- 11. Ambient Air Sampling System
- 12. Dust Sampling System
- 13. Sun Shed
- 14. Air Conditioning unit

All Dimensions are in mm

**AMBIENT AIR QUALITY MONITORING STATION**

# Drawing of Cup Board and Working Table



## Item Code No. 05

### **COD DIGESTION APPARATUS**

Soild State block heater unit with provision for samples to be digested at a time in 38 mm. dia reaction vessels with 20 ml. sample sizeto heat at temperature of 150 degC  $\pm$  1 degC controlled by PID based Digital Controller cum indicator (LCD Display) with date/time. It has provision for 15 samples and is supplied with 15 nos glass reaction vessels and 15 nos. air condensers. Fitted with a automatchi digital timer with buzzer. To work on 220/230 volts AC supply.

To be provided with NABL Accredited Lab. Calibration Certificate for Temperature Control.

**Accessories :**

15 nos glass reaction vessels and 15 nos. air condensers **(Extra Items)** .



## **Item Code No. 06**

### **Online GPS (Global Positioning System) tracking system**

1. The system should indicate and record the exact location(s) / point(s) visited.
2. The system should withstand the ambient temperature of -40°C to +85 °C.
3. Store and display real time positions in the portable device itself as well in the server and represent on the Indian map.
4. The GPS recorders should include time, date, location, speed, heading, latitude, longitude and altitude.
5. The data be stored so that GPS receivers be able to draw contour maps, plot the route, mark points of interest etc.
6. The system should have Built-in flash memory and long battery life for for the storage of months of travel information.
7. The system be designed so as to cover the entire country (India). The map (updated) should be in built with system and could support Multiple Indian language such as Hindi other than English.
8. The GPS server would be installed at CPCB, Head Office, Delhi with 40 trackers initially. However, the server should be compatible upto 100 trackers.

## Item Code No. 07

### HOT AIR OVEN

#### *Specifications*

Chamber	:	Stainless Steel (304 Grade)
Shelves	:	02/03 Nos. (S. Steel Perforated Adjustable Shelves)
Outer Body	:	Mild Steel Painted with white stoved enamel
Door	:	Double Walled Insulated Door with heavy hinges and Door Lock.
Insulation	:	High Grade Glass wool insulation (75 mm)
Temp. Range	:	Ambient + 5 °C to 300 °C
Controller	:	Microprocessor based LCD Display Digital Temperature Controller cum Indicator with pt-100 sensor with Date/Time Display
Safety Features:	:	An Additional inbuilt thermostat is also provided to Cut off power supply in case the Controller fails.
Air Circulation:	:	An Inbuilt Air Circulation Fan with Motor to maintained Temp. uniformity inside the Chamber.
Heaters	:	ISI Marked Heating Elements.
Timer	:	0-24 Hrs. Automatic Timer to switch On/Off Cycles/
Panel	:	With Mains & Heating Indicator, On/Off Switch, Digital
Controller, Safety Thermostat, Fan On/off Switch.		
Power	:	220 Volts (+/- 10 Volts), Single Phase, 50 Hz.

To be provided with NABL Accrediated Lab. Calibration Certificate for Temperature of Hot Air Oven. Complete with Air Ventilator Ports, Main Lead & Plug. Instruction Manual and Warranty Card are provided with the equipment.

<b>Sr.No.</b>	<b>Chamber Size</b>	<b>Trays</b>
1.	14" x 14" x 14"	02 Nos.
2.	18" x 18" x 18"	02 Nos.
3.	18" x 24" x 18"	02 Nos.
4.	24" x 24" x 24"	02 Nos.
5.	24" x 36" x 24"	03 Nos.

## Item Code No. 08

### Incubator (Microbiological)

- Incubator with micro-processor based temperature cum indicator with Sensor having temp. range from 5 °C to 80 °C  $\pm 0.5$  °C.
- Heating elements placed in the ribs at the Bottom and sides.
- Sturdy and double walled inside chamber of Stainless steel. Outer chamber of powder coated **mild steel**.
- Gap between the two walled filled with preferably PUF/ Glasswool insulation.
- Heating element should be of high grade chrome plated nichrome.
- Air ventilation to be provided on the top of the unit.
- All the control switches and pilot lamps should be fitted on the front panel.
- Tray should be adjustable and be supplied with stainless steel wire mesh.
- Dynamically balanced chamber circulation for uniform temperature.
- The chamber has the doors, inner full view glass door, outer metallic door with positive locking.
- Operation : 230  $\pm 10$  V 50 Hz AC
- Sizes
  - 12"x12"x12" (300x300x300mm.)
  - 14"x14"x14" (350x350x350mm.)
  - 18"x18"x18" (450x450x450mm.)
  - 18"x18"x24" (450x450x605mm.)
  - 24"x24"x24" (605x605x605mm.)

## **Item Code No. 09**

### **Microwave Oven**

1. Capacity (34 Liters)
2. Type of Microwave Oven (Microwave with Convection and Grill Cavity)
3. Body Stainless Steel powder coated stainless steel
4. Number of Preset Menus: 6-12 or more
5. Variable Cooking Power Levels 5-10
6. Type of Wave intellowave
7. Auto Defrost : By Weight
8. Programme Panel Single Touch tactile/ Dial
9. Rotary Turntable: about 400 mm.
10. Safety Lock
11. Display Type: LCD app. Dimension Width (MM) 560, Depth (mm) 540, Height (mm) 340 Approximate
12. Not Weight (kg) 22.0 kg.
13. Auto shut with door opening
14. Alarm after completion of programme/ command
15. Power output : 1000-1500 watt.
16. Power consumption : App. 2500 watt.
17. Warranty period – minium1year
18. Power requirement – Ac 220/ 240V, 50Hz

## Item Code No. 10

### pH METER

The instrument should be bench top, impact and corrosion resistant

Range	pH	: 0.0 to 14.00
	mV	: $\pm 1600$
	Temperature, °C	: 0 to 100
Resolution	pH	: 0.01
	mV	: 0.1
	Temperature, °C	: 0.1
Accuracy	pH	: $\pm 0.01$
	mV	: $\pm 0.1$
	Temperature, °C	: $\pm 0.5$
Display		: Custom LCD
Temperature compensation		: Automatic 0 to 100°C
Buffer recognition		: Automatic and manual
Power		: 9V Battery and 230 VAC adapter
Calibration		: Minimum 3 Stage (4.0, 7.0 and 10.0 pH) Or multistage calibration with additional buffer solution of pH 2,5, 8 & 9 etc
pH buffers pouches		: 4.0, 7.0 and 10.0 pH ( traceable to NABL)
Combined (pH + temp)electrodes		: Two (One as spare)

The system should be complete with measuring electrode, calibration and maintenance kit, detailed operation and maintenance manual (English), dust cover, power cable and plug compatible with Indian sockets and spares and consumables for three years continuous use.

**Vacuum Filtration Assembly (Microbiology)**

• **Specification :**

Three piece stainless filtration manifold, filtration funnels and oil free diaphragm type vacuum pump complete with 2L borosilicate glass vacuum flask and tubing.

**Stainless steel filtration manifold : 1 No.**

- SS-316 construction
- Three filter holder
- PTEE valve
- Handles for easy portability
- Autoclavable

**Stainless steel filter funnels : 3 Nos.**

- SS-316 construction
- Suitable for 47 mm membrane filters
- Neoprene cork and lid
- Stainless steel clamp for leak tight seal
- Autoclavable
- Capacity 250ml or more

**Vacuum pump : 1 No.**

- Compact air cooled
- Diaphragm type
- Handy
- Oil free
- Low maintenance
- Moisture and solvent resistant
- Flow rate : about 5.5 LPM
- Power requirement : AC 220 V, 50 Hz
- Auto-cut to protect from over-heating.
- Simple repair and maintenance
- To be fitted with pressure gauge.
- Low noise
- Pressure-controlled and anti-suck-back valve.
- Warranty Period – Minimum Three Years.
- AMC - Cost for five years after warranty period be mentioned.

## CHECK LIST FOR THE BIDDER

1. Bid on original Tender form only.
2. Separate EMD against each item.
3. Earnest money or necessary documentary proof for exemption of earnest money with the part 1 of the bid.
4. Price bid must be Part II of the bid in the form provided at Annexure II of the tender document.
5. The Basic Price, Taxes, Packing, Forwarding, Handling, Transportation Insurance, Installation charges etc. must be quoted clearly. Do not use vague terms like "As Actual, Approximately etc".
6. Do not use the terms As per Specification of Tender Documents' in respect of instruments. There should be proper write up of production quoted for supported with printed leaflets literature.
7. In case the bidders desirous to quote more than one item, separate envelope should be submitted (technical & price bid) for individual item superscribing item code number and name.
8. **With technical bid, the bidder should provide a copy of the price bid format (giving details of the items, accessories, spares etc. ) without specifying the price other than one mentioned in annexure-II of this tender document.**