

No. C-48021/01-15/14-15/LCB/Mat.

TENDER NOTICE

No.C-48021/01-15/2014-15/LCB/Material

Dated: 23-07-2014

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

Website: www.cpcb.nic.in

email Id: cpcb@alpha.nic.in

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Central Pollution Control Board
(Ministry of Environment & Forests)
"Parivesh Bhawan" East Arjun Nagar.
Delhi – 110032. India
Tel. Nos. 22308202, 43102030 – Extn.243

TENDER NOTICE

No.C-48011/01-15/2014-15/LCB/Materials.

Dated.23-07-2014

Central Pollution Control Board invites sealed tenders from the manufacturer/supplier in India for the supply of various Laboratory Instruments/equipments.

02. The Tender Document along with detailed specifications of the instruments can be obtained from the office of Administrative Officer (Material), Central Pollution Control Board.

03. The request for tender documents sent by post will be accepted up to 08.08.2014.

Sale of Tender Document - From 23-07-2014 to 14-08-2014 on all working days between 11.00 AM to 5.00 PM

Cost of Tender Document - By hand ₹ 500.00
By post ₹ 600.00 Tender fee only through pay order/Demand Draft

Last date & time for submission - 19-08-2014 up to 10.00 AM

Opening date of Technical bids - 19-08-2014 at 11.30 AM

Bidder using downloaded tender forms must submit separate tender fee by Demand Draft along with 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.

Member secretary
CPCB

CENTRAL POLLUTION CONTROL BOARD
(Ministry of Environment and Forests)
"Parivesh Bhavan" East Arjun Nagar,
Delhi – 110 032, INDIA

DETAILS OF TENDER NOTICE

NO.C-48011/ 01-15/2014-15/LCB/MATERIALS:

Dated: 23-07-2014

FOR SUPPLY OF LABORATORY INSTRUMENT/EQUIPMENTS

Sealed Tenders are invited on behalf of the Member Secretary, Central Pollution Control Board from Manufacturer/Suppliers in India and abroad for the supply of various Laboratory Instrument / equipments as listed below:

Centrifuge 1, Compound Microscope 1, Dehumidifier 1, Flame Photometer 1, Primary Flow Meter (For calibrating Flow & VOC sampler) 1, fuming chamber (fume hood) 2, Mechanical Shaker 1, Meterological Station 5, Microscope (binuclear and attached display system) 2, Multi Filtration Assembly 1, Oil Sealed Mechanical Vacuum Pump 4, Stack Monitoring Kit 4, Theodolite 1, Ultrasonic Water Bath 4, Vacuum Pump (Suction Pump) 8.

02. The Tender Documents along with detailed specifications of the instruments can be obtained in person on Production of authority letter of the Firm or by post from the office of the Administrative Officer (Material), Central Pollution Control Board or by the authorized representative with prescribed tender fee in the form of DD/Payorder drawn in favour of Central Pollution Control Board, Delhi

03. The Bid must be submitted in English, by the principal / their authorized suppliers.

04. The Earnest Money as indicated in Bid document must be submitted by the Bidder along with the Tender in the form of Demand Draft only drawn in favour of "CENTRAL POLLUTION CONTROL BOARD" payable at Delhi (India). It should be either in Indian Rupees or in bid currency (equivalent amount as per the exchange rate prevailing). The Indian agent/ representative should furnish an authorization letter from their foreign Principal supplier authorizing to deposit the EMD on their behalf.

05. The request for Competitive Bidding Documents sent by post will be accepted strictly Up to 08.08.2014. 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. Other details are as follows:

Sale of tender document	-	From 23-7-2014 to 14-08-2014 on all working days between 11.00 am to 5.00 pm.
Cost of tender document	-	By hand ₹ 500.00 By post ₹ 600.00

Earnest Money along with Tender - **As indicated in the Tender Document**

Last date & time for submission - **Up to 10.00 AM on 19-08-2014**

Date of opening of tender - **At 11.30 A.m. on 19-08-2014**

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

**Administrative Officer
(Material)**

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) Pre-contract Integrating pact form
- xii) Detailed specification of the instruments.
- xiii) 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 can be rejected without assigning any reason.

1.8 The bidder should be a manufacturer. This tender notice, tender forms, schedule of requirements, specification etc are also available on CPCB's Website www.cpcb.nic.in. Bidders using down loaded tender form must submit a separate tender fee by Demand Draft/pay order 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 for item Sl. No. will be for _____ starting from the date of successful commissioning of the instrument and for the rest of the item warranty will be for a period of twelve months. 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 If the last date for sale, submission and opening of Tenders falls on any Government declared holidays, the next working day at the same time will be considered last dates of the same.
- 1.15 The bid shall contain no interlineations, 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/Speed post/Courier. 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 e-mail, Telephone, Fax, E-Mail and Tele fax, money order shall not be entertained.
- 1.20 The Tender Notice No.**C-48021/01-15/2014-15/LCB/Materials Dated 23-07-2014** (The item code number is given in the specification sheet against each item must be invariably be quoted in the bid and for further correspondence in this regard will be entertained.

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 downloaded 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 excise duty excluded price in item-wise and total price of each instrument separately indicating the Govt. levies, freight, insurance, installation charges and other expenditure item-wise F.O.R. CPCB/Locations as indicated in the Annexure – V of this document. No C/D form will be issued against VAT. Necessary excise duty exemption certificate as applicable will be supplied. The 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 the copies of any missing documents. Failure to do so will be at bidders risks.
- 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 in to consideration. Prior to award of purchase order the buyer can call any details, explanation, regarding technical & financial aspect.

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 BE SUBMITTED SEPARATELY AGAINST EACH ITEM. CONTAINING TECHNICAL, PRICE BID AND ITEM WISE EMD; 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 AND ITEM WISE EMD; INCASE BIDDERS DESIRES TO QUOTE MORE THAN ONE ITEM. THOSE TENDERS DO NOT COMPLY THE ABOVE INSTRUCTION WILL NOT BE CONSIDERED. PLEASE DO NOT ENCLOSE THE EMD ALONGWITH THE ENVELOPS FOR PRICE BID. THE EMD ALONGWITH THE COMBINED BID WILL NOT BE CONSIDERED.

- 2.5 The Tender is to be submitted "single, stage- three envelopes system" i.e. the second sealed envelope will contain the Earnest Money Deposit full information required to judge pre-qualification, earnest money, 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 No., 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-48021/01-15/LCB/2014-15** due on **23-07-2014** for supply of instruments & 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-48021/01-15/2014-15/LCB/Materials Dated 23-07-2014** for instruments & equipment" . Both the above envelopes must be separately sealed and shall be kept in one envelope bearing the address of Central Pollution Control Board and superscribed with bold letter "TENDER FOR INSTRUMENTS & EQUIPMENTS- NOT TO OPEN BEFORE **19-08-2014** AT 11.30 A.M. The senders address should be mentioned in all envelopes. Item Code number(s) should be mentioned invariably on all envelopes. Separate bids for separate item should be submitted. The combined bid will not be considered.
- 2.6 Technical & Commercial part of the tender will be opened on due date i.e. at **11.30 A.M.** on **19-08-2014** in the office of the Central Board in presence of the Representative of the Tenders who would like to present Sealed Price part of Technically and Commercially acceptable tenders will be opened on a later date which will be communicated by the Board on the same day or on a later date.
- 2.7. The bidder shall furnish, as part of its bid, bid security for each instrument/equipment separately for the amount mentioned in scheduled IV requirements.
- 2.8. The bid security shall be in the form of Demand Draft/Pay order 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.
- 2.9 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).
- 2.10 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 and commissioning of the instrument.

- 2.11 The validity of Tender would be for a minimum period of 120 days from the date of opening of Tenders. A Bid valid for a shorter period may be rejected by the Board as non responsive. Incase, the validity to be extended, 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.
- 2.12 The rates should be quoted both in words and figures.
- 2.13 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.
- 2.14 Tenders not in proper sealed cover or received through/E-mail/Fax/telefax will not be entertained.
- 2.15 Conditional Tenders will be rejected without assigning any reason.
- 2.16 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.
- 2.17 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.
- 2.18. Eventual suggestions for modification or subsidiary Tenders are principally not admissible.
- 2.19 The specification are clearly mentioned in the document and 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.
- 2.20 The placement of work order/purchase order will be according to technical evaluation of the Tender and after consideration of its price worthiness.
- 2.21 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.
- 2.22 **The supplier should attach a blank copy of financial bid (without cost/price figures) along with the technical bid to assess the items included/components quoted in the bid.**

- 2.23 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.
- 2.24 With the submission of the Tender, the Bidder accepts the conditions of the Tender.
- 2.25 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.
- 2.26 If the instrument supplied is not in conformity with the specification other than asked for, it will have to be replaced at the risk and cost of the supplier. No freight and other charges will be paid by the Board.
- 2.27 The list of instruments/equipment, their approximate quantity and point of delivery is given at Annexure-V and the detailed specification of the instrument are given in the tender document (**pages _____ to _____**). 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.
- 2.28 Each and every folio of the Tender must be signed by the Bidder.
- 2.29 **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.**
- 2.30 The bidder should provide a complete list of spares and consumables required for operation and maintenance of the instruments along with the price list.
- 2.31. 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.
- 2.32. 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.
- 2.33 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.
- 2.34 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 sole distributor will only be considered. A copy of the latest supply order (showing details of price) executed to any other Departments under Govt of India should be attached along with the price bid.

- 2.35. 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.
- 2.36 At any time prior to the deadline for submission of bids the buyer may for any reason whether at it's own initiative or in response to a clarification requested by a prospective Bidder, modify the bidding documents by an amendment.
- 2.37 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.
- 2.38 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.
- 2.39. 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.
- 2.40 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.
- 2.41 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.
- 2.42. The warranty/guarantee of the instrument/equipment should be clearly mentioned in the Bid.
- 2.43. 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.
- 2.44. 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, III WILL BE KEPT IN THE SECOND PART OF BID i.e. PRICE BID.

- 2.45. **PLEASE NOTE THAT THERE IS NO NEED TO ENCLOSE THE ENTIRE TENDER DOCUMENT (SUPPLIED BY THE BOARD) WITH YOUR BID. ONLY ANNEXURE-I,II AND III NEED TO BE ENCLOSED AS PER INSTRUCTION STIPULATED IN PARA 2.44, 2.5 AND OTHER RELEVANT PARAGRAPHS OF THIS BID.**
- 2.46. The firm whosoever getting the award/purchase order should sign and submit a Pre-integrity pact with the buyer as per the format attached as Annexure – VI of this tender documents.

3.0. PAYMENT CONDITIONS

- 3.1 Full payment will be released on delivery, installation and successful commissioning of the instruments/equipment (to be certified by concerned Scientist/Incharge of the Division, and on submission of bills in duplicate and on furnishing performance Bank Guarantee for 10% of the purchase order valid for a period of 60 days beyond the warranty period. No advance payment will be made in any case and no proposal for documents through Bank will be considered. Hence, no preference will be given for such advance payment proposal. The defective, substandard and contrary to the specifications instruments supplied have to be replaced by the supplier at their cost and responsibility.
- 3.2 In case several bills are presented, against one order, the reference of supply order and other details should be mentioned in each and every bill.

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 reasons, award/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 shall be borne by the party invoking the Arbitration clause.
- 4.2 It is a term of the contract that the party invoking the arbitration shall specify the dispute for disputes to be referred to the arbitration under this clause together with the amount or amount claimed in respect of each such dispute.
- 4.3 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.

4.4 The courts at Delhi shall have exclusive jurisdiction to entertain and try all matters arising out of this contract.

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 calendar 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/Authorized Distributor's or Agent's Address in Delhi, if any. ii) Name, Designation, Address Telephone & Fax Numbers of the Authorized Person who may be contacted during the process of the purchase concerned under this document (Applicable for all the suppliers)	:	
4.	Item Code Number(s) & description of item quoted for	:	
5.	Whether Earnest Money Deposited (Amount: Rs.	:	
6.	If yes, Demand Draft No, Date and Name of issuing Bank.	:	
7.	Tender fee Demand Draft No; Date and Name of issuing Bank	:	
8.	Validity of Tender	:	
9.	If the tender documents are accepted in full (Yes or No)	:	
10.	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
1	2	3	4	5	6	7	8

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.

Administrative Officer (Material)

Signature with date & stamp of the bidder

UNDERTAKINGDATE _____
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/Pay order 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.....2014

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

Central Pollution Control Board**SCHEDULE OF EARNEST MONEY Deposit (EMD)**

Item Code	Instrument / Equipment	Quantity Requirement	EMD
LCB-14-1	Centrifuge	1 (One)	450/-
LCB-14-2	Compound Microscope	1 (One)	3000/-
LCB-14-3	Dehumidifier	1 (One)	4500/-
LCB-14-4	Flame Photometer	1 (One)	900/-
LCB-14-5	Primary Flow calibrator (For Flow calibrating of VOC sampler)	1 (One)	3000/-
LCB-14-6	Fuming Chamber (Fume Hood)	2 (Two)	2100/-
LCB-14-7	Mechanical Shaker	1 (One)	3000/-
LCB-14-8	Meteorological Station	5 (Five)	30,000/-
LCB-14-9	Microscope (binuclear and attached display system)	2 (Two)	18,000/-
LCB-14-10	Multi Filtration Assembly	1 (One)	3000/-
LCB-14-11	Oil Sealed Mechanical Vacuum Pump	4 (Four)	4800/-
LCB-14-12	Stack Monitoring Kit	4 (Four)	24,000/-
LCB-14-13	Theodolite	1 (One)	1500/-
LCB-14-14	Ultrasonic Water Bath	4 (Four)	6000/-
LCB-14-15	Vaccum Pump (Suction Pump)	8 (Eight)	9600/-

Central Pollution Control Board**LOCATION OF DELIVERY AND INSTALLATION OF INSTRUMENTS/EQUIPMENT**

Item Code	Instrument / Equipment	Quantity Requirement	Delivery Locations & Nos.
LCB-14-1	Centrifuge	1 (One)	WL-1
LCB-14-2	Compound Microscope	1 (One)	ZOBH-1
LCB-14-3	Dehumidifier	1 (One)	ZO-V- 1
LCB-14-4	Flame Photometer	1 (One)	ZO-V- 1
LCB-14-5	Primary Flow calibrator (For Flow calibrating of VOC sampler)	1 (One)	ZOK- 1
LCB-14-6	Fuming Chamber (Fume Hood)	2 (Two)	ZO-V- 2
LCB-14-7	Mechanical Shaker	1 (One)	ZOK-1
LCB-14-8	Meteorological Station	5 (Five)	AL-1, ZOK-1, ZOBH-1 ,ZOV-1, POA-1
LCB-14-9	Microscope (binuclear and attached display system)	2 (Two)	BL-2
LCB-14-10	Multi Filtration Assembly	1 (One)	ZOBH-1
LCB-14-11	Oil Sealed Mechanical Vacuum Pump	4 (Four)	ZOL-1, ZOK-1, ZOV-1, ZOB-1,
LCB-14-12	Stack Monitoring Kit	4 (Four)	ZOL-1, ZO-V- 2 ,ZOS-1
LCB-14-13	Theodolite	1 (One)	ZOK-1
LCB-14-14	Ultrasonic Water Bath	4 (Four)	ZOL-1, ZOK-1, ZOV-1, POA-1
LCB-14-15	Vaccum Pump (Suction Pump)	8 (Eight)	IL-2, ZOL-2, ZOK-3, ZOV-1

Abbreviations:

AL = Air Laboratory, HQs Delhi

TOL = National Reference Trace Organics Laboratory; HQs Delhi

IL = Instrumentation Laboratory; HQs Delhi

WL = Water Laboratory; HQs Delhi

BL = Bio-Science Laboratory; HQs Delhi

ZOL = Zonal Office – Lucknow;

ZOK = Zonal Office – Kolkata

ZOV = Zonal Office – Vadodara

ZOBH = Zonal Office – Bhopal

ZOS = Zonal Office – Shillong

ZOB = Zonal Office – Bangalore

POA = Project Office – Agra

PRE CONTRACT INTEGRITY PACT

General

This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made onday of the month of2014, between, CPCB, An autonomous body acting through Shri, (Designation of the officer, Ministry/Department, Government of India) hereinafter called the “BUYER”, which expression shall mean and include, unless the context otherwise requires, his successors in office and assigns of the First Part and M/s..... represented by Shri....., Chief Executive Officer (hereinafter called the “BIDDER / SELLER” which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BUYER proposes to procure (Name of the Stores/Equipment/Item) and the BIDDER/Seller is willing to offer/has offered the stores and

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency, constituted in accordance with the relevant law in the matter and the BUYER CPCB work under the aegis of Environment & Forests, performing its functions as per the provisions of Water Act 1974, Air Act ,1981 and EPA Act, 1986.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to :-

Enabling the BUYER to obtain the desired said stores/equipment at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDERS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BUYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of the BUYER

- 1.1 The BUYER undertakes that no official of the BUYER, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.
- 1.2 The BUYER will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERS.
- 1.3 All the officials of the BUYER will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an inquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

Commitments of BIDDERS

2. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-
 - 3.1 The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.
 - 3.2 The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.
 - 3.3* BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.
 - 3.4* BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid/contract.
 - 3.5* The BIDDER further confirms and declares to the BUYER that the BIDDER is the original manufacturer/integrator/authorized government sponsored export entity of the defence stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
 - 3.6 The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payments he has made, is committed to or intends to make to officials of the BUYER or their family members, agents,

brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

- 3.7 The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.
- 3.8 The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
- 3.9 The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.
- 3.10 The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.
- 3.11 The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.
- 3.12 If the BIDDER or any employee of the BIDDER or any person action on behalf of the BIDDER, either directly or indirectly, is a relative of any of the officers of the BUYER, or alternatively, if any relative of an officer of the BUYER has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filling of tender.
- 3.13 The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BUYER.

3. Previous Transgression

- 4.1 The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.
- 4.2 The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

4. Sanctions for Violations

- 5.1 Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER) shall entitle the BUYER to take all or any one of the following actions, wherever required:-

- (i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER (s) would continue.
- (ii) The Earnest Money Deposit (in pre-contract stage) and/or Security Deposit/Performance Bond (after the contract is signed) shall stand forfeited either fully or partially, as decided by the BUYER and the BUYER shall not be required to assign any reason therefore.
- (iii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.
- (iv) To recover all sums already paid by the BUYER, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the BUYER in connection with any other contract for any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.
- (v) To encash the advance bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the BUYER, along with interest.
- (vi) To cancel all or any other Contracts with the BIDDER. The BIDDER shall be liable to pay compensation for any loss or damage to the BUYER resulting from such cancellation/rescission and the BUYER shall be entitled to deduct the amount so payable from the money (s) due to the BIDDER.
- (vii) To debar the BIDDER from participating in future bidding processes of the Government of India for a minimum period of five years, which may be further extended at the discretion of the BUYER.
- (viii) To recover all sums paid in violation of this Pact by BIDDER (s) to any middleman or agent or broker with a view to securing the contract.
- (ix) In cases where irrevocable Letters of Credit have been received in respect of any contract signed by the BUYER with the BIDDER, the same shall not be opened.
- (x) Forfeiture of Performance Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.2 The BUYER will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (x) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

5.3 The decision of the BUYER to the effect that a breach of the provisions of this Pact has been committed by the BIDDER shall be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent Monitor (s) appointed for the purposes of this Pact.

6. **Fall Clause**

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

7. **Independent Monitors**

7.1 The BUYER has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).

7.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

7.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

7.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

7.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BUYER.

7.6 The BIDDER(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the BUYER including that provided by the BIDDER. The BIDDER will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/Subcontractor(s) with confidentiality.

7.7 The BUYER will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

7.8 The Monitor will submit a written report to the designated Authority of BUYER/Secretary in the Department/ within 8 to 10 weeks from the date of

reference or intimation to him by the BUYER / BIDDER and, should the occasion arise, submit proposals for correcting problematic situations.

8. **Facilitation of Investigation**

In case of any allegation of violation of any provisions of this Pact or payment of Commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

9. **Law and Place of Jurisdiction**

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat/place of the BUYER.

10. **Other Legal Actions**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

11. **Validity**

11.1 The validity of this Integrity Pact shall be from date of its signing and extend upto 5 years or the complete execution of the contract to the satisfaction of both the BUYER and the BIDDER/Seller, including warranty period, whichever is later. In case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

11.2 Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

12. The parties hereby sign the Integrity Pact aton.....

BUYER

BIDDER

Name of the Officer.

CHIEF EXECUTIVE OFFICER

Designation

Deptt./ MINISTRY/PSU

Witness

Witness

1.....

1.....

2.....

2.....

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF CENTRIFUGE

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-1			
Equipment Name: Centrifuge			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Material	Steel body, table top model, Compact and corrosion Resistant with see through acyclic lid	
2.0	Speed	Max. 15,000 rpm	
3.0	Centrifugal force (RCF)	Max 18000 xg	
4.0	Centrifuge Tube Size	Max. 100 ml	
5.0	Capacity	Max. 400 ml	
6.0	Rotary angle head	8 X 50 ml	
7.0	Speed Regulation	Stepless with zero start switch	
8.0	Speed meter	Continuous reading tape	
9.0	Timer	upto 60 minutes and adjustable	
10.0	Temperature range	Ambient	
11.0	Display multifunctional	LCD	
12.0	Power Supply	230 ± 10 V 50 Hz AC power	
13.0	Protection	Auto shut down for imbalance	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-1			
Equipment Name: Centrifuge			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
14.0	Other Features	Microprocessor controlled	
		Door safety lock	
		Auto magnetic rotor identification	
		Induction drive	
		Fast stop facility	
15.0	Accessories	Operation manual – One	
		Voltage stabilizer – One	
		Dust cover	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF COMPOUND MICROSCOPE

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-2			
Equipment Name: Compound Microscope			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Microscope Stand	It should have adjustment by vertical movement of the nosepiece by means of coaxial coarse and fine adjustment kinds.	
		Stage should be fixed.	
		Roller guide stroke (from the focal point on the stage surface)	
2.0	Stage:		
	Cross movement	Atleast 20 cm x 20 cm minimum	
	Stage Area & Controls	Traversing area 5 cm x 5 cm with low positioned Coaxial control knobs, Provision for accommodation of various culture vessels and specimen holders, sedgewick rafter counting cell, slides of various dimensions, watch glass etc.	
3.0	illumination		
	Light source	Halogen bulb 12 V, 50 Watt with bulb cantering device and light intensity control	
	Filter holder	Provision for 4 flip-up filter holders green, light blue interference filter and frosted filter	
	Condenser Holder	It should be Flip-up or swing out type	
4.0	Observation System	Light path for photomicrography, 3 setting positions, linked with focusing reticles for observation tube, 35 mm camera & multi-tube mounting part	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-2			
Equipment Name: Compound Microscope			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
		Binocular tube inclined 45 °C inter papillary distance adjustment from 55 mm to 75 mm constant tube lense	
		Eyepiece 5 x; 10 x	
		Multi tube light path, provision for photo-micrographic equipment directly as well as the multi-tube attachment	
		Spare bulbs – 6 Nos.	
5.0	Condenser	There should be working distance turret condenser light annuli for 4x, 10x, 20x, 40x, 100x objectives, oil immersion.	
6.0	Objectives	Phase contrast objectives	
		4x	
		10x	
		20x	
		40x	
		100x	
		With case and cover	
7.0	Additional item to be supplied	Spare set of Eyepieces – 1 No.	
		Spare set of objectives – 1 No.	
8.0	Guarantee / Warranty	Comprehensive guarantee / warranty should be valid for three years.	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF DEHUMIDIFIER

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-3			
Equipment Name: Dehumidifier			
Quantity:1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Dehumidifier for de-humidification in a room to control humidity, with low power consumption	
2.0	Capacity	50 Ltrs/day at 22° C, 80% RH	
		Dehumidifying capacity – 2.1 Kg/Hr or more	
3.0	Body	Powder coated / Galvanized steel / PVC	
4.0	Compressor	Rotary type, Reputed make Kirloskar / Elgi / Ingersoll Rend with inbuilt internal overload protector, Noise level < 50 dB	
5.0	Power supply	230 ± 10 V 50 Hz AC; Single phase,	
6.0	Drain connection	Stainless steel tank / galvanized tank	
7.0	Humidistat	Digital humidistat, settable at desired humidity value	
8.0	Interconnection	Interconnection copper tubings	
9.0	Automatic Cut Off	Automatic Cut Off & Cut in approx. at 40 ± 5% humidity setting.	
10.0	Other features	Slide out washable filter	
		Water tank capacity : about 7 litres with hose connect	
		Reliable mechanical control	
11.0	Guarantee	Three years comprehensive.	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF FLAME PHOTOMETER

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-4			
Equipment Name: Flame Photometer			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Digital, microprocessor controlled Flame Photometer for measurement of Sodium, Potassium and other alkali metals by Flame photometry technique in various matrices of environmental samples	
2.0	Measuring Range	Sodium element – Lower concentration 10 ppm without dilution; Higher concentration 100 ppm without dilution	
		Potassium element – Lower concentration 10 ppm without dilution; Higher concentration 100 ppm without dilution	
3.0	Display	LED / LCD readout with record for date & time	
4.0	Sensitivity	Sodium – 2 ppm or less	
		Potassium – 1 ppm or less	
5.0	Detector	Photo conductive cell	
6.0	Minimum Detection limit	Sodium – 0.2 ppm	
		Potassium – 0.1 ppm	
7.0	Filters	Typical 10 mm for sodium and potassium with automatic filter selection facility	
8.0	Reproducibility	Low concentration \pm 1% full scale	
		High concentration \pm 2% full scale	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-4			
Equipment Name: Flame Photometer			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
9.0	Operating Air pressure	0.45 kg/cm ²	
10.0	Fuel gas	LPG	
11.0	Output	RS-232 port ; PC link data transfer	
12.0	Power supply	230 ± 10 V, 50 Hz AC	
13.0	Air Compressor	Oil free air compressor, built in air regulator and air filter to provide stable moisture/oil free air supply	
14.0	Warranty	Comprehensive warranty for at least 3 years	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF PRIMARY FLOW CALIBRATOR (FOR CALIBRATING FLOW OF VOC SAMPLER)

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-5			
Equipment Name: Primary Flow Calibrator (For calibrating flow of VOC sampler)			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Flow Meter	Digital portable flow calibrator, easy to read, digital display, automatically calculate volumetric flow rate for calibration	
2.0	Flow Rate	0.5 ml/min. to 500 ml/min.	
3.0	Flow accuracy	± 2 % or below	
4.0	Power supply	9 volts battery ; should also include 230 ± 10 V, 50 Hz AC power adaptor and recharger	
5.0	Power control	Preferably automatic power off for extended battery life	
6.0	Traceability	National or International (NIST) Standards traceable	
7.0	Calibration Certificate	Calibration certificate from any NABL Accredited laboratory with validity at least for one year to be supplied	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF FUMING CHAMBER

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-6			
Equipment Name: Fuming Chamber (Fume Hood)			
Quantity: 2 (Two) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Fume Chamber (Fume Hood)	General purpose Heavy duty Chemical Resistant Fume hood Exhaust system to prevent exposure to toxic, irritating or noxious chemical vapours, acidic fumes, acidic gases, dust	
	External Dimension (WXDXH)	Atleast 2400 mm X 900 mm X 2400 mm ; Height of worktop from ground level minimum 700 mm or more	
	Construction (Exterior)	Powder Coated (70-80 microns) / Polypropylene durable, 1.5 mm and 1.2 mm gauge heavy duty CRCA sheets (as per IS : 513) with rigid structure	
	Construction (Interior)	Chemical and heat resistant, fire retardant, smooth finish, easily cleanable panels made out of durable special material (ASTM flame spread index <25), integral work wall (6 mm thick)	
	Chemical Storage base cabinet	Internal special chemical resistant material lining to the cabinet walls (material with ASTM flame spread index <25)	
		3 or 4 vertical partition of base cabinet with lock facility	
Baffle arrangement	Interstitial three point suction system for light, normal and heavy fumes) with baffle to ensure smooth and immediate exhaust of fumes		
2.0	Worktop	Chemical resistant, splash and spillage proof, joint less black granite worktop	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZO's)			
Code Number: LCB-14-6			
Equipment Name: Fuming Chamber (Fume Hood)			
Quantity: 2 (Two) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
3.0	Shutter (Sash)	Vertical, toughened float glass sash (atleast 4 mm thick) smooth and light sash operation; Maximum Sash opening atleast 740 mm or more	
4.0	Exhaust System with flow control	Heavy duty, chemical resistant exhaust system with Chemical resistant blower, exhaust ductwork and connection accessories. Means of adjusting exhaust flow (damper or frequency inverter)	
	Air Flow Display	Microprocessor controlled digital display of the realtime airflow levels in standard units	
5.0	Fittings		
	Sink, water tap and drainage	Worktop should have oval shaped small sink- one no. for drainage with water tap and waste collection trap. Proper service lines access.	
	Wet & Dry Service Fittings	Remotely operated color coded total 8 Nos. service valves with polyethylene plumbing and brass fittings for gas connections, Water, Nitrogen, Vacuum, Compressed Air. Located in separate media columns on front of fume hood, chilled water supply, Nitrogen, Vacuum, compressed air i.e 4 RHS + 4LHS	
	Lighting	Prewired, Fluorescent light (20 watt , 2 nos. or more) with electronic ballast , energy efficient, acidic vapor proof fitting for proper illumination (typical light intensity 800 lux or more in zero ambient conditions)	
	Cable entering port	Easy access of cables from fume hood to electrical sockets	
6.0	Power Supply	230 ± 10 V, 50 Hz AC	
7.0	Noise Level	Low noise level (preferably < 70 dB)	
8.0	Safety Certification	Safety certification from standard agency such as CE/ EN/ ASHRAE/ISO-9001-2000/ BIS	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-6			
Equipment Name: Fuming Chamber (Fume Hood)			
Quantity: 2 (Two) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
9.0	Installation & Commissioning	Supply, complete Installation with external duct work (If required at site), commissioning	
10.0	Training on operation	Free training for operation and maintenance	
11.0	Spares & Consumables	All necessary accessories to be provided for its smooth running	
12.0	Warranty	Three Year comprehensive warranty	
13.0	General Condition of Supply	<ol style="list-style-type: none"> 1. The instrument and all its sub units should operate on 230 ± 10 volts 50 Hz power supply. 2. All the operation and maintenance manuals, circuit diagrams, application notes and application softwares to be supplied should be in English language. 3. The supplier / manufacturer should have Indian agent to provide after sales service. 4. The main unit and all the sub units of the instrument should be serviced by the Indian representative of supplier. 5. The Bidder should be a manufacturer/authorized representative of a manufacturer, who must have designed, manufactured, tested and supplied two numbers of such equipment similar to the type specified in the past five years, which shall be in successful operation for atleast 2 years as on the date of bid opening. 6. The bidder should furnish the information on past supplies and their satisfactory performance. 7. Bidders shall invariably furnish documentary evidence (client's 	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-6			
Equipment Name: Fuming Chamber (Fume Hood)			
Quantity: 2 (Two) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
		certificate – atleast two) in support of the satisfactory operation of the equipment as specified above. 8. Notwithstanding anything stated above the purchaser reserves the right to assess the capability and capacity of the bidder to perform the contract, should the circumstances warrant such an assessment in the overall interest of the purchaser. 9. Comprehensive warranty with spares for 3 years from the date of installation of the instrument should be covered.	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF MECHANICAL SHAKER

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-7			
Equipment Name: Mechanical Shaker			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Mechanical shaker (Kahn type) for energetic reciprocating shaking of liquid material contained in bottles, conical flasks to ensure mixing and dissolution of substance.	
2.0	Approx. Dimension	580 mm (l) x 500 mm (w) x 120 mm (h)	
3.0	Shaking motion	Horizontal shaking top tray with to-and-fro (reciprocating) action	
4.0	Speed	Variable and electronically controlled speed adjustment with 30 to atleast 300 shaking strokes per minute.	
5.0	Speed indication	Digital	
6.0	Operation	Simple and continuous operation with timer providing pre-selection upto atleast 60 minutes or infinity.	
7.0	Housing	Should be resistant to aggressive liquids	
8.0	Mounting Unit	Mounting unit should be adjustable for shaking 50 ml to 500 ml Erlenmeyer flasks, volumetric or other flasks, reagent bottles etc.	
9.0	Power Requirement	230 ± 10 V, 50 Hz AC	
10.0	Accessories	Complete with power cable, plug and operation manual.	
11.0	Warranty	Comprehensive warranty for at least 3 years	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF METEOROLOGICAL STATION

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	The meteorological instrumentation should be interfaced directly with the Data Acquisition System after passing through a lightning protection isolation box. A crank – up telescoping meteorological 10 meters tower to be used to mount the meteorological instrumentation. The wind speed, wind direction, temperature, relative humidity and solar radiation sensors should be mounted on the tower. All sensors should be NIST (National Institute for Standards and Technology, USA) traceable	
2.0	WIND DIRECTION SENSOR	The sensor to provide low starting threshold, fast response and accuracy over a wide operating range in adverse environmental conditions. Specifications are as follows:	
	Wind Direction Operating Range	0 to 359 degree	
	Accuracy	± 5 degrees or better	
	Resolution	1 degree	
	Sensor type	Ultrasonic	
	Threshold	0.5 m/s or less	
	Response time	10 seconds or better	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
3.0	WIND SPEED SENSOR	The anemometer to provide a low starting threshold, wide dynamic response and high accuracy over a wide range of wind speeds and a variety of environmental conditions.	
	Operating Range	0 – 60 m/s	
	Sustainability	Upto 75 m / sec	
	Accuracy	± 0.5 m/sec or better	
	Resolution	1 degree	
	Sensor type	Ultrasonic	
	Response Time	10 sec or better	
	Threshold	0.5 m/sec or less	
4.0	AMBIENT TEMPERATURE	Temperature measurement system specifications are as follows:	
	Calibrated Temperature Range	-10 ° C to 60 ° C	
	Response time	10 seconds or better	
	Resolution	0.1 °C	
	Accuracy	± 0.2 °C or better with radiation shield	
	Sensor type	Resistance type	
5.0	RELATIVE HUMIDITY SENSOR	Relative Humidity Measurement system. Specifications are as follows	
	Measuring Range	0 to 100% RH	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	Accuracy	± 3.0 % or better	
	Response time	10 sec or better	
	Resolution	1% or better	
	Sensor type	Capacitive / Solid state	
6.0	PRESSURE		
	Range (with single sensor)	600 to 1100 hPa	
	Accuracy	± 0.2 hPa or better	
	Resolution	0.1 hPa	
	Sensor type	Solid state	
	Response time	10 sec or better	
7.0	SOLAR RADIATION	The detector should be able to measure short – wave radiation which comprises the direct component of sunlight and the diffuse component of skylight.	
	Range	0 to 1500 w/m ³ or better	
	Accuracy	± 5.0 % or better	
	Resolution	5 w/m ²	
	Temperature dependence	0.15% per °C Max	
	Response Time	10 microseconds	
	Linearity	1 % from 0 to 3000 watts m ²	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
8.0	RAINFALL SENSOR		
	Measuring range	0.2 mm to 100 mm / hr	
	Accuracy	± 5% or better	
	Resolution	0.2 mm	
	Sensor type	Tipping bucket rain a gauge or any other suitable sensor	
	Response time	10 sec or better	
9.0	TELESCOPING CRANK - UP METEOROLOGICAL TOWER	The wind direction, wind speed, relative Humidity, temperature and radiation sensors are to be mounted on the Meteorological Tower. The tower is to be a free standing four section telescoping tower provided with a hand crank to raise and lower instruments mounted on the top section	
	Extended Height	10 meters	
	Retracted Height	2 metres	
	Wind load Limit	0.7896 sq. m. (8.5 sq. ft) at 50 mph	
	Number of Sections	4 (Four)	
	Construction material	Galvanised steel or aluminium	
		Note: Humidity and temperature sensors to be supplied with weather and thermal radiation shield made of anodized aluminium and	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
		sensor should be supplied with all necessary cables, connector and mounting arrangements as required	
10.0	SPECIFICATIONS OF DATA LOGGER	Data logger with 8 analog and 24 digital inputs. Ability to log channels at different intervals	
		Should have capability of averaging and displaying real time data and averaged data over a period of 1 min, 15 min, ½ hr, 1 hr, 4 hrs, 8 hrs, 24 hrs, 1 month and year.	
		Communication between data logger and computer using standard multi drop RS 232 Connector.	
		The data logger should have internal battery with charger with USB Port for downloading of data through pen drive, if required.	
		The data logger should support PSTN line or GSM modem for data transfer.	
	Power Supply	230V AC, ± 10 V AC, 50 Hz, over voltage protection unit for power supply line.	
11.0	SOFTWARE FOR DATA ANALYSIS	Software should be compatible to Window 7 Professional. For analysis like averaging for different timings including daily and monthly averages, plotting diurnal variation and daily variation, making wind roses etc.	
12.0	COMPUTER		
	Make	Reputed brand such as HP/Compaq/Dell	
	Processor	Intel Core i7 3770 (3.4 GHz, 8MB cache, 4 cores)	
	RAM	4 GB DDR-III RAM 1066 MHz (upgradeable to 8 GB)	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	HDD	3.5", 500 GB 7200 RPM SATA HDD	
	Monitor	21" TFT-LCD Flat Colour (Digital)	
	DVD Writer	22 X DVD Multi-drive Internal	
	Ports	2 Serial, 1 parallel and 2 USB front 3 Rear USB2 Port, 1PS-2 Keyboard, 1PS-2 Mouse port, 1VGA 4 bays (2 external & internal) with LAN 1PS	
	Key board	Latest multimedia (HP / Microsoft) Internet ready	
	Mouse	Optical mouse with pad	
	Ethernet	32/64 bit auto selectable Ethernet ports with autosensing, 2 nd NIC card on PCI, Autosensing is to cater to 100 / 1000 Mbps speeds automatically and not a boot ROM.	
	Graphics	Integrated Graphics Media Accelerator x 4500, support upto 800 MB video memory through DVMT	
	Sound	Integrated 5.1 Channel high definition audio subsystem and inbuilt stereo speakers	
	Other features	Energy star compliant, screen blinking, hard disc & system idle mode in power on set up, password, power supply source protected.	
	Software	Windows 7 Professional or Latest version with media documentation and certificate of authenticity alongwith original CD	
		Preloaded Norton Antivirus with latest version of 3 years lifetime along with Licensed CD	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
13.0	COLOUR LASER PRINTER		
	Speed (pages per minute)	At least 12	
	Resolution	1200 x 1200 dpi	
	RAM	Minimum 32 MB	
	Main tray Capacity	At least 250 sheets	
	Interface	Parallel & USB	
	Operating System	Windows XP / 7 Professional Compatible	
	Power supply	230 ± 10 V AC, 50 Hz,	
14.0	Installation / Warranty	Free of Cost installation and two year comprehensive warranty + one year extended warranty for complete system.	
15.0	Calibration certificate	Calibration certificates for all sensors are to be provided, which should be traceable to National / International Standards.	
16.0	Operation & Maintenance Training	Complimentary all expenditure inclusive one week training to be provided on operation and preventive maintenance of the system to concerned CPCB official.	
17.0	Spares / Consumables	Required spares / consumables for 3 years of continuous operation	
18.0	General Condition of Supply	<ol style="list-style-type: none"> 1. The instrument and all its sub units should operate on 230 ± 10 volts 50 Hz power supply. 2. All the operation and maintenance manuals, circuit diagrams, application notes and application softwares to be supplied should be in English language. 	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-8			
Equipment Name: Meteorological Station			
Quantity: 5 (Five) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
		<ol style="list-style-type: none"> 3. The supplier / manufacturer should have Indian agent to provide after sales service. 4. The main unit and all the sub units of the instrument should be serviced by the Indian representative of supplier. 5. The Bidder should be a manufacturer/authorized representative of a manufacturer, who must have designed, manufactured, tested and supplied two numbers of such equipment similar to the type specified in the past five years, which shall be in successful operation for atleast 2 years as on the date of bid opening. 6. The bidder should furnish the information on past supplies and their satisfactory performance. 7. Bidders shall invariably furnish documentary evidence (client's certificate – atleast two) in support of the satisfactory operation of the equipment as specified above. 8. Notwithstanding anything stated above the purchaser reserves the right to assess the capability and capacity of the bidder to perform the contract, should the circumstances warrant such an assessment in the overall interest of the purchaser. 9. Comprehensive warranty with spares for 3 years from the date of installation of the instrument should be covered. 	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF MICROSCOPE (BINOCULAR AND ATTACHED DISPLAY SYSTEM)

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-9			
Equipment Name: Microscope (Binocular and attached display system)			
Quantity: 2 (Two) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Binuclear microscope with electrical illumination for magnification and observation of bacteria, viruses, slides, biological material etc. with built-in / attached facility of display of magnified object.	
2.0	Objectives	Parfocalled, parcentered, achromatic	
3.0	Functions	Count, capture, measure, record, amalgamate, Internet meeting	
4.0	Illuminator	20 W halogen with rheostat	
5.0	Stage dimensions	145 mm x 135 mm, 76 mm x 50 mm movement range	
6.0	Pixel	640 x 480 with PCI card	
7.0	Resolution	320 x 240, 480 TV lines	
8.0	Shutter speed	30 fps	
9.0	Output	Digital	
10.0	Cable(s)	USB, RCA-Video, S-Video	
11.0	Data transfer	7.5 MB/sec	
12.0	Data formats	BMP, JPG, MIG	
13.0	Magnification	4x / 10x / 40x / 100x	
14.0	Power supply	230 ± 10 V, 50 Hz AC	
15.0	Accessories	Spare Halogen lamp – One; Spare Eyepiece Cable & plug, Instruction/Operation/Maintenance manual, Dust Cover	
16.0	Warranty	Comprehensive warranty for at least 3 years	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF MULTI FILTRATION ASSEMBLY

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-10			
Equipment Name: Multi Filtration Assembly			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
A.	Filter Holder		
1.0	Material	Stainless steel lid, funnel, base, clamp and filter support of stainless steel perforated filter mesh with three places Manifold.	
2.0	Filter diameter	47 mm	
3.0	Filtration Area	12.5 cm ²	
4.0	Funnel Capacity	Autoclavable Stainless Steel Body, 47 mm dia with 650 ml (Minimum) Capacity.	
5.0	Suction flask Capacity	1.0 / 2.0 litre	
6.0	Connections	Outer diameter of base outlet 10 mm.	
7.0	Operating pressure	Vacuum only	
B.	Vacuum Pump		
1.0	Type	Single phase motor with IP 44 type of protection with carrying handle and sturdy rubber feet.	
2.0	Vacuum	Should be adequate for smooth filtration of water/waste water. The pump should be an oil free pump/diaphragm with continuous heavy duty type.	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-10			
Equipment Name: Multi Filtration Assembly			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
3.0	Flow rate / Rating	15 LPM (Maximum) / 0.12 KW or I / 16 HP	
4.0	Supply Voltage	230 ± 10 Volts, 50 Hz, Single phase AC	
5.0	Operating Ambient Temperature	10 - 50 °C	
6.0	Accessories	Should be supplied complete with perforated Neoprene stopper, Vacuum hose pipes, stainless steel forceps and power cord with plug, toggle switch and operating manual with standard tool kit.	
7.0	Guarantee / Warranty	Comprehensive warranty for at least 3 years	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF OIL SEALED MECHANICAL VACUUM PUMP

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-11			
Equipment Name: Oil Sealed Mechanical Vacuum Pump			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Two Stage Rotary Vane type, oil sealed mechanical vacuum pump	
	Nominal Pumping Speed 50 Hz	9.7 m ³ /h	
	Pneurop Pumping Speed 50 Hz	8.5 m ³ /h	
	Ultimate partial pressure	10 ⁻⁴ mbar	
	Ultimate total pressure closed gas ballast	2.10 ⁻³ mbar	
	Ultimate total pressure open gas ballast	10 ⁻² mbar	
	Water vapour capacity	125 g/h	
	Water vapour pressure 50 Hz	20 mbar	
	Power requirement	230 ± 10 V AC, 50 Hz Single phase	
	Operating temperature	10 °C - 45 °C	
	Oil capacity	1.0 litre	
	Inlet flange	DN 25 ISO-KF	
	Exhaust flange	DN 25 ISO-KF	
2.0	Oil Filter	Should be equipped with oil filter / oil mist eliminator	
3.0	Maintenance Kit	Maintenance kit consisting of lip seals, shaft sleeves, valves, shaft seals, O' rings, vanes, springs and plugs etc. should be provided for complete overhauling of the vacuum pump.	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-11			
Equipment Name: Oil Sealed Mechanical Vacuum Pump			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
4.0	Oil Specifications	Paraffin based mineral oil	
	Vapor pressure	1.3.10 ⁻⁶ mbar at 54 °C	
	Viscosity	118 cst at 40 °C	
		12.5 cst at 100 °C	
	Density	0.886	
	Flash Point	260 °C	

CENTRAL POLLUTION CONTROL BOARD
TECHNICAL SPECIFICATIONS OF STACK MONITORING KIT

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-12			
Equipment Name: Stack Monitoring Kit			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Stack Monitoring Kit	Portable, compact, light weight, user friendly control module with multifunction electronic unit, digital electronic manometer, programmable start & stop facility for sampling pump, digital display for stack gas & dry gas meter, temperature, light weight sampling pump and impinge module design complying specifications recommended by USEPA	
		Facility for mounting thermocouple, pitot tube and probe together to keep all the component functional during sampling is mandatory	
2.0	Stack Temperature Range	(i) Ambient to 600°C displayed on a digital pyrometer	
		(ii) 500 °C to 1000 °C displayed on a digital pyrometer	
3.0	Stack Velocity Range	3 - 30 m/s	
4.0	Particulate Sampling	6 - 60 lpm collection on thimble type filter up to 0.3 micron rating	
5.0	Gaseous Sampling	0.6 - 6 lpm collection in a set of Borosilicate glass impingers containing selective reagents	
6.0	Pitot Tube	Modified S-type pitot tube fabricated from SS 304 or equivalent, Construction features should be as per USEPA method 1 to 4 & 17 or CPCB document Emission Regulation (Dec. 1985) Part III	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-12			
Equipment Name: Stack Monitoring Kit			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
7.0	Sampling Probe	Fabricated from SS 304 tube of suitable diameter (not less than 15 mm ID). Suppliers have to quote all sizes & length available. Required length of Pitot tube & Sampling probe will be decided by CPCB as per their availability.	
8.0	Nozzles	A set of minimum 4 (four) fabricated from SS 304 or equivalent material with internal diameters suitable to cover the full range of stack velocities. Leading edge of nozzle should be sharp and tapered. Minimum internal diameter of the nozzle should not be less than 4 mm	
9.0	Thimble Holder	Thimble Filter holders fabricated from SS 304 suitable to hold cellulose / glass fiber or other thimbles.	
10.0	Thermocouple	Thermocouple sensor with digital display capable of measuring temperature from 0 to 600 °C covered with acid resistant casing and appropriate length (length same as that of pitot tube)	
		Separate suitable thermocouple with digital display capable of measuring temp. from 500 °C to 1000 °C covered with acid resistant casings and appropriate length (length same as that of pitot tube)	
11.0	Stack gas Sampling module	Should contain Timer, Temperature sensor, temperature displays, Rotameter, vacuum gauge, Dry Gas meter, cold box and control panel	
	Timer	Stop watch; Range : 0 to 60 minutes ; Minimum resolution- one second with residual battery back up facility	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-12			
Equipment Name: Stack Monitoring Kit			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	Temperature Sensor	At metering point (0 – 50 °C)	
	Temperature Display	With Toggle switch for display of ambient, Stack (Flue gas) and temepearture at metering point	
	Rotameter	Separate Rotameter for Particulate and Gas 0-60 lpm Rotameter for particulates and 0-6 lpm Rotameter for gases	
	Vacuum Gauge	Digital or Analog, Dual scale, Range 0 – 30 psi & 0 -1552 mm Hg	
	Dry Gas meter	Inbuilt digital dry gas meter having resolution 1 L	
	Cold Box	Cold box to hold atleast 6 – 8 impingers;	
	Impingers	6 Nos. of minimum 250 ml capacity borosilicate glass impingers to be supplied along with cold box with provision to keep ice	
		4 Nos of 120 ml capacity borosilicate glass impingers to be supplied along with cold box with provision to keep ice	
	Control Panel (Console)	Should have leak check facility with orifice or other type of control knob	
12.0	Stack Gas Velocity Module	For velocity measurements the module should have provision for housing of Digital manometer and digital pyrometer	
	Digital Manometer	Capable to measure in the range 0 – 1300 mm of H ₂ O	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-12			
Equipment Name: Stack Monitoring Kit			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	Digital Pyrometer	Suitable for measuring ranges 0 to 600 °C and 500 °C to 1000 °C	
13.0	Vacuum Pump	Compatible, portable, light weight, heavy duty pump	
		Capable to ensure 60 LPM effective gas flow	
		With single phase motor operating on 230 ± 10 V, 50 Hz AC	
14.0	Sample Collection Tubes (Hose)	Sample collection hose/conduits should have push fit system to prevent leakages. Hose should be flexible protected from outer shocks and aberrations. Length of the hose will be user selectable. Two separate sizes (10 m and 30 m) shall be quoted	
15.0	Calibration Certificates	Third Party (Any Nationally or Internationally Accredited Calibration Laboratory). Calibration certificate for Manometer, Rotameters, Pitot tube, Nozzles, Thermocouple and Dry Gas meter etc with validity of atleast one year should be provided	
16.0	Tools	To be supplied with tool box comprising essential tool required for connecting various components and for routine maintenance	
17.0	Spares & Consumables	To be supplied atleast for three years trouble free operation	
18.0	Warranty	Three years comprehensive warranty	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF THEODOLITE

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-13			
Equipment Name: Theodolite			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Digital Theodolite with reliable and simple design to be used for general topographic surveying application and in particular for position fixing during discharge measurements on rivers and canal from boat. Should comply with IS: 2976-1964	
2.0	Technical specifications		
	Housing	Splash waterproof	
	Image	Erect	
	Magnification	30 X	
	Effective diameter of objective	>40 m	
	Field of view	1*30 to 1*40'	
	Focusing range	1.7 m to Infinity	
	Resolving power	± 2.5 to 3.0 sec	
	Stadia Ratio	1:100	
	Stadia multiplier	100	
	Stadia addition	0	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-13			
Equipment Name: Theodolite			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	Optical Plummet magnification	≥2.3x	
	Focusing Range	Less than 0.5 m	
	Sensitivity of level plate	20 sec per 2 mm run	
	Tribarch	Compatible detachable tribarch	
	Vertical circle level	1 sec per 2 mm run	
	Graduation error Horizontal / Vertical circle	1 sec (least count of micrometer)	
	Operating temperature	+5 to 50 °C	
3.0	Accessories		
	Digital eyepiece	Two (one for telescope, one for micrometer)	
	Dark glasses	Dark green, light green, light blue	
	Waterproof cover	Durable plastic material	
	Plumb bob / adopter plug	One unit	
	Lens cover set	One set	
	Tool set	Spanner, tormy pins, screw drivers etc. – One set	
	Cleaning brush	One unit	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-13			
Equipment Name: Theodolite			
Quantity: 1 (One) No.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
	Oil bottle	One	
	Electrical illuminating unit	Two units	
	Telescopic 4.0 meter leveling staffs and accessories	2 Nos. complying with IS: 11961 – 1986	
	Carrying case	One unit of light fiber plastic, wood or metal having sufficient strength to bear normal shocks and with receptacles for holding accessories with handle carrying shoulder strap etc.	
	Tripod	1600 mm	
		Light & strong alloy, telescopic with mounting for battery	
		Illumination unit and clamping arrangement for instrument	
		Should comply with IS: 8330 – 1997	
	Centering Provision	30 to 50 mm	
Operation Manual	One set		
4.0	Calibration Certificate	To be provided with calibration certificate	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF ULTRASONIC WATER BATH

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-14			
Equipment Name: Ultrasonic Water Bath			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Heavy duty, rectangular water bath having user defined variable ultrasource frequency selection, temperature selectivity, rust free and sturdy, MS body with powder coating outside water bath, tray and cover shall be high quality steel conforming to BIS standards.	
2.0	External Dimensions (LxWxH)	Approx. 450 x 200 x 350 mm	
3.0	Bath construction and dimensions (LxWxH)	Stainless Steel 300 x 150 x 150	
4.0	Volume	Minimum 6 lit or more	
5.0	Insert tray (LxWxH)	Two Nos.; size approx. 280 x 125 x 120 mm built up of Stainless Steel Mesh holder basket 10x10 mm and stainless steel cover with handle on top	
6.0	Ultra Sound level	250 Watt/period, 18KHz or above.	
7.0	Electrical power	230 ± 10V / 50HZ AC	
8.0	Other requirements	Compact & light weight. Should be provided with all spares, accessories, operation manual, dust cover etc.	
		Should ensure safe operation and simple handling.	
		Built-in set timer with 60 minutes countdown for service	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-14			
Equipment Name: Ultrasonic Water Bath			
Quantity: 4 (Four) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
		Digital control panel should consist power switch, convenient touch control, temperature readout, turn heat On / Off, tab for temperature adjustment	
		Temperature setting thermostatically controlled with LED readout	
		Should be able to maintain temperature of 65 °C	
		Suitable drainage facility for bath	
		Should include calibration certificate for temperature controller ultrasonic wave generation	
9.0	Operation & Maintenance Manual	Two sets	
10.0	Dust Cover	One set	
11.0	Warranty / Guarantee	Three years from date of installation.	

CENTRAL POLLUTION CONTROL BOARD

TECHNICAL SPECIFICATIONS OF VACUUM PUMP (SUCTION PUMP)

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-15			
Equipment Name: Vacuum Pump (Suction Pump)			
Quantity: 8 (Eight) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
1.0	Description	Two Stage Rotary Vane type pump operated on 230 ± 10V 50 Hz Single Phase AC supply.	
2.0	Nominal Pumping Speed 50 Hz	9.7m ³ /h	
3.0	Pneurop Pumping speed 50 Hz	8.5 m ³ /h	
4.0	Ultimate partial pressure	10 ⁻⁴ mbar	
5.0	Ultimate total pressure closed gas ballast	2.10 ⁻³ mbar	
6.0	Ultimate total pressure open gas ballast	10 ⁻² mbar	
7.0	Water vapour capacity	125 g/h	
8.0	Water vapour pressure 50 Hz	20 mbar	
9.0	Weight	Not more than 30 kg	
10.	Max. nominal power rating 50 Hz	0.5 kW	
11.0	Operating ambient temperature range	10 °C to 45 °C	
12.0	Oil capacity	1.0 L	
13.0	Inlet flange	DN 25 ISO-KF	
14.0	Exhaust flange	DN 25 ISO-KF	
15.0	Oil Filter	Pump should be equipped with oil filter/ oil mist eliminator.	

CENTRAL POLLUTION CONTROL BOARD

Procurement of instruments / equipment for Central Pollution Control Board Laboratories (HQs & ZOs)			
Code Number: LCB-14-15			
Equipment Name: Vacuum Pump (Suction Pump)			
Quantity: 8 (Eight) Nos.			
S. No.	Specifications	Requirement	BIDDER'S RESPONSE: (Bidder shall indicate "Complied" or "Non Complied" as applicable in each row. In case of "Non Complied", detail shall be mentioned)
16.0	Maintenance Kit	Should include lip seals, shaft sleeves, valves, shaft seals, 'O' rings, vanes, springs and plugs etc for complete overhauling of the vacuum pump.	
17.0	Vacuum pump oil	Appropriate Vacuum pump oil - atleast for two times use	

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 of bidders desirous to quote more than one item, separate envelop 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.**