

**JHARKHAND STATE POLLUTION CONTROL
BOARD**

**HEC TA DIVISION BUILDING, PO- DHURWA, RANCHI
(JHARKHAND)**

INTERNATIONAL COMPETITIVE BIDDING



JSPCB

**SUPPLY, INSTALLATION , COMMISSIONING
AND
OPERATION & MAINTENANCE SERVICES
OF
CONTINUOUS AMBIENT AIR QUALITY MONITORING
STATION
(CAAQMS)
AT
Mines Rescue Centre, Dhanbad**

**BIDDING DOCUMENT
VOLUME-I**

BIDDING DOCUMENTS

INTERNATIONAL COMPETITIVE BIDDING FOR

**SUPPLY, INSTALLATION, COMMISSIONING
AND
OPERATION & MAINTENANCE SERVICES
FOR**

CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS (CAAQMS)

Mines Rescue Centre, Dhanbad

VOLUME 1

CONTENTS

	INVITATION FOR BIDS
SECTION I	INSTRUCTION TO BIDDERS
SECTION II	SCOPE OF WORKS
SECTION III	FORM OF TECHNO-COMMERCIAL BID
SECTION IV	FORM OF FINANCIAL BID
SECTION V	GENERAL CONDITIONS OF CONTRACT (G.C.C.)...
SECTION VI	SPECIAL CONDITIONS OF CONTRACT (S.C.C.).....

Total No. of Pages :

JHARKHAND STATE POLLUTION CONTROL BOARD,
HEC TA Division Building , PO- Dhurwa, Ranchi

INVITATION FOR BIDS (IFB)
INTERNATIONAL COMPETITIVE BIDDING

IFB NO.

Date 17-01-2011

PROJECT : SUPPLY, INSTALLATION, COMMISSIONING AND OPERATION
& MAINTENANCE SERVICES OF CONTINUOUS AMBIENT AIR
QUALITY MONITORING STATIONS (CAAQMS) AT Dhanbad.

1. Jharkhand State Pollution Control Board (JSPCB), invites sealed bids in two envelopes from eligible bidders for supply, installation & commissioning of equipments (listed in Bid documents) for Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and Operation & Maintenance of this CAAQMS at Dhanbad and related services as specified in the bid document.
2. This invitation for the Bid is open to any bidder who is a reputed manufacturer or authorized representative of the manufacturer, who on its own or along with his associate as O & M partner meets the qualifying Requirements stipulated hereunder for participation in the tender. The bidder shall furnish satisfactory evidence to establish that bidder meets the following qualifying requirements.
 - 2.1 The bidder should be a manufacturer (at least four Ambient Air Analyzers as listed in the scope of work) who must have manufactured, supplied, tested and commissioned minimum six (6) nos. similar air monitoring stations either container based or otherwise in any one year of the last five years which should be in satisfactory operation.
 - 2.2 For all the items not manufactured by the Bidder i.e. Analyzers, Monitors, Calibrators and Sensors, the bidders should be authorized by the manufacturers for these items as per the format "Form of letter of authorities" provided as Attachment 3 of Section 3. Except where make is prescribed.

- 2.3 Bidder or their authorized representative should have adequate financial capability to execute the contract.
 - 2.4 The bidder should furnish the information on all past supplies and satisfactory performance, in "Performance Statement" as per Attachment No. 8 C of Section 3 and minimum two (2) no. documentary evidences (client certificates in favour of bidder or manufacturers of equipment) in support of the satisfactory operation of similar air monitoring stations.
 - 2.5 The bidder or its associates as an O &M partner in India, (any authorized agency in India) should have well trained O & M personnel on its regular rolls as per following details and on award of LOI bidder shall submit the name of two engineer one graduate and one diploma holder in electronics/ instrumentation for central data management and CAAQM station respectively. Their resume, PF slip as a proof of their regular employment with the bidder. Both the engineer should be on pay roll of the O & M partner.
 - 2.6 The O&M partner shall furnish an undertaking regarding carrying out satisfactory O &M of CAAQMS covered in this document as per terms & conditions of the document on behalf of the bidder. This information is to be provided as per Attachment 5 & 9 of Section III.
3. A complete set of bidding documents may be purchased by any interested eligible bidder from 17-01-2011 to 12-02-2011 on the submission of a written application to the Member Secretary, Jharkhand State Pollution Control Board, HEC TA Division Building, PO-Dhurwa, Ranchi upon payment of a non-refundable fee of **Indian Rupees Ten thousand (Rs. 10,000)** in the form of Demand Draft in favour of **Member Secretary, Jharkhand State Pollution Control Board, Payable at Ranchi-834 004**. Bidding documents requested by mail will be dispatched by registered/ speed post / courier on payment of an extra amount of **Rupees 1,000/-**
- The same can be downloaded from the website of Jharkhand State Pollution Control Board (<http://www.jspcb.org>). In this case bid shall be accompanied along with a demand draft of Rupees ten thousand as cost of BOQ/tender document. Jharkhand state pollution Control Board will not be held responsible for the postal delay, if any, in the delivery of the documents or non-receipt of the same.
4. This bidding takes simultaneous bidding procedure in two part (envelope) bidding system. All the eligible and interested bidders are required to submit the Technical bid and Financial Bid simultaneously. Only the bidders whose Technical bid is

- found substantially responsive will be notified by the Board of the date and place to participate in the public opening of the financial bid, in writing later.
5. Eligible Bidders must submit their bids for complete scope of work. Any bid submitted for incomplete scope shall be rejected outrightly.
 6. The Representative of Agents of Foreign Bidders in India are also permitted to purchase Tender Document on behalf of their principals by submitting a letter of authority from their principals and by depositing requisite cost of tender document.
 7. **All the bids must be accompanied by bid security in accordance with the Instructions to Bidders in the bidding documents.**
 8. All bids must be submitted on or before **13:00_Hrs (IST) 12-02-2011**. Any offer received after expiry of the time and date prescribed for receiving complete bid will not be entertained. Only the technical Bid will be opened in public on the same date at 15.00 hrs. in the presence of the bidders or their representative, who choose to attend on the specified date and time at the office of JSPCB.
 9. Issuance of Bidding Documents will not be construed to mean that such bidders are automatically considered qualified.
 10. The bid must accompany bid security money as indicated above, failing which it will not be considered.
 11. JSPCB will not be responsible for any cost(s) or expense(s) incurred by bidders in connection with the preparation or delivery of bids.
 12. The Jharkhand State Pollution Control Board reserves the right to reject any or all the bids without assigning any reason whatsoever.
 13. In the event of date being declared as a closed holiday the date for submissions of bids and opening of bids will be the following working day at the appointed time.
 14. Interested eligible Bidders may obtain further information from the inspection of the bidding documents.
 15. Description of works shall be as per annexure -I enclosed.

The Member Secretary,
JHARKHAND STATE POLLUTION CONTROL BOARD,
HEC TA DIVISION BUILDING, PO- DHURWA, RANCHI-834 004
JHARKHAND Fax No. 0651-2400850/2400138
Tel. No. 0651-2400902/851/852 Email- info@jspcb.org

ANNEXURE - I

Sl. No.	Name of the instrument/ Equipment	Quantity (Nos)	Estimated Cost of each item (Rs.in Lacs)	Total Estimated Cost (Rs. in Lacs)	Cost of B.O.Q. (in Rs.)
1	Automatic Ambient CO Analyzer		5.00	5.00	
2	Automatic Ambient SO ₂ Analyzer	01	6.00	6.00	
3	Automatic Ambient NO _x Analyzer +NH ₃	01	6.00	6.00	
4	Automatic Ambient O ₃ Analyzer	01	6.00	6.00	
5	PM Monitor with (PM ₁₀ +PM _{2.5} Measuring Head)	01	12.00	12.00	
6	BTX Monitor/ Analyzer	01	16.00	16.00	
7	Multi-calibration systems for gaseous monitors comprising of gas supply / generation and automated calibration	01	5.00	5.00	
8	Meteorological Instrumentation comprising Wind direction, Wind speed, vertical wind speed, Ambient temperature, Relative humidity, Solar Radiation, Barometric Pressure mounted on telescoping crank up meteorological tower.	1 Set	4.00	4.00	
9	Computer system consisting of one PC along with Laser Printer and DAS at the monitoring station and one PC at central office with peripherals and software for data acquisition / display / transfer and system integration, telephone, Modem.	1 Lot	7.00	7.00	
10	Housing with foundation for Continuous Automatic Monitoring Stations with Sampling line, Internal fitting, Instruments racks, Electrical fittings , Gas line fittings, Tools (electrical and mechanical), Data display system, Recommended spares .	1 Lot	8.00	8.00	
11	Three Phase UPS, 15 KVA (4 hrs. back-up)	1 Unit	2.50	2.50	
12	Split Air Conditioners (2T capacity)	2 Nos.	0.75	1.50	
	Sub Total			Rs 79.00	
13	Annual operation & Maintenance of CAAQMS for five years		@ Rs. 10 lacs/year	Rs.50.00	Rs. 10000

VOLUME 1

SECTION I

INSTRUCTIONS TO BIDDERS

C O N T E N T S

1.	Definitions
2.	Introduction
3.	Bidding Documents
4.	Preparation and Submission of Bid
5.	Preparation of Techno-commercial Bid
6.	Preparation of Financial Bid
7.	Submission of Bid
8.	Opening and Evaluation of Techno-commercial Bid
9.	Notification of Successful Techno-commercial Bid
10.	Opening of Financial Bid
11.	Examination of Financial Bid
12.	Evaluation and Comparison of Financial Bid
13.	Award of Contract
14.	Performance Security
15.	Expense of Bid
16.	Responsibility for information supplied

Important : Bidders are 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

copied of any missing documents. Failures to do so will be at the Bidder's risk.

INSTRUCTION TO BIDDERS

1. DEFINITIONS

The terms used in this bidding documents shall have the meaning defined hereunder:

- 1.1 "The Project" or "The Works" means supply, installation & Commissioning of equipments for Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and Operation & Maintenance of this CAAQMS at Dhanbad.
- 1.2 "The Board" means the Jharkhand State Pollution Control Board, having its office at HEC Building, TA Division, Dhurwa, Ranchi- 824 004, India and shall include any person or persons authorized by the Board. The Board is also executing agency of the Project. "The Owner" means the Board.
- 1.3 "The Bid" means the offer or proposal of the Bidder to be submitted for the works in accordance with the stipulations set forth in this Bidding Documents.
- 1.4 "The Techno-commercial Bid" means the Techno-commercial part of the Bid.
- 1.5 "The Financial Bid" means the financial part of the Bid.
- 1.6 "The Bidder" means either the manufacturer of the Equipment or his authorized Representative, who submits the Bid for the Works.
- 1.7 "The Authorized representative" means the bidder who has enclosed the manufacturer's authorization as per the format "Form of letter of authorities" provided as Attachment 3 of Section III.
- 1.8 "The Contractor" or "The Contractor" means the Bidder, whose Bid for the Works has been accepted by the Board and includes his personal representatives, successors and authorized assignees.

- 1.9 "The Manufacturers" means the firms, which produces the equipment to be furnished by the Contractor under the Contract with the Board.
- 1.10 "The Bidding Documents" mean all the documents in Volume I and II in the bidding documents annexed thereto.
- 1.11 "The Contract" means the written agreement to be concluded between the Board and the Contractor and includes terms and conditions stipulated on the Bidding Documents and any other descriptions annexed thereto which form an integral part of the agreement to be provided by the Board.
- 1.12 "The Equipment" means all kind of materials, machinery, components, apparatus, articles and instruments for the Project to be provided by the Contractor to the Board under the Contract.
- 1.13 "The Specifications" means the specifications of the Works to be performed by the Contractor in conformity with those specified in the Technical Specifications of Volume II and all other related documents in the Bidding Documents, and modifications thereof or additions thereto as may from time to time be made and approved in writing by the Board through the Consultant in case prior to the Contract and agreed upon by both the Board and the Contractor after the Contract.
- 1.14 "S/W" means the Scope of Works in Section II of this Volume.
- 1.15 "The Sites" means CAAQMS at Dhanbad.
- 1.16 "The Contract Price" means the price payable to the contractor under the contract for the full and proper performance of its contractual obligations.

2. **INTRODUCTION**

- 2.1 The Jharkhand State Pollution Control Board intends to invite bids from eligible bidders for supply, installation & commissioning of equipments for 1 (one) no. of Continuous Ambient Air Quality Monitoring Station (CAAQMS) and operation & Maintenance of this CAAQMS at Dhanbad.

2.2 **Scope of Works**

The description of Scope of Works is set forth in Section II of this Volume 1.

2.3 **Size of Bid**

The whole bid is for single composite package as detailed at Section - II i.e scope of work.

2.4 **Eligible Equipment and conformity to the bidding documents**

- (1) All countries are the eligible source countries for goods and services to be supplied under this contract.
- (2) For the purpose of this clause "origin" means the place where the equipment or component parts thereof are grown, or produced. Equipment are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.
- (3) The Bidder shall furnish the Certificate of Country of Origin (duly authenticated by competent authority of that country) of each Equipment (as per Attachment 4 to Section III) in these instructions, as the documentary evidence of the eligibility of the Equipment.
- (4) The origin of equipment may be distinct from the nationality of the bidders.
- (5) Conformity of the Bidding documents may be in the form of literature, drawings, and data, and the Bidder shall also furnish:
 - a) A detailed description of equipment, essential technical and performance characteristics.
 - b) A list giving full particulars, including available sources of all spares (whether mandatory or recommended) and their prices, special tools etc., necessary for the proper and continued functioning / maintenance of the equipment on long term basis.
 - c) An inventory of the spare parts for each equipment available with the O&M partner in India mentioning the

- ones not available in India and have to be imported in case necessary after the expiry of O&M period.
- d) **A clause-by-clause commentary of the Board's Technical Specifications** demonstrating the equipment's substantial responsiveness of these specifications or a statement of deviations or exceptions to the provisions of Technical Specifications.

The above stated requirements are a minimum and the Board reserves the right to request any additional information concerning the Bid Proposal in response to this Invitation of Bids.

2.5 Qualifying Requirements of Bidders

This invitation for the Bid is open to any bidder who is a reputed manufacturer or authorized representative of the manufacturer, who on its own or along with his associate as O&M partner meets the Qualifying Requirements stipulated hereunder for participation in the tender. The bidder shall furnish satisfactory evidence to establish that bidder meets the following qualifying requirements.

- 2.5.1 The bidder should be a manufacture (at least four Ambient Air Analyzers as listed in the scope of work) who must have manufactured, supplied, tested and commissioned minimum six (6) nos. similar air monitoring stations either container based or otherwise in any one year of the last five years which should be in satisfactory operation.
- 2.5.2 For all the items not manufactured by the Bidder i.e. Analyzers, Monitors, Calibrators and Sensors, the bidders should be authorized by the manufacturers for these items as per the format "Form of letter of authorities" provided as Attachment 3 of Section 3.
- 2.5.3 Bidder or their associate as O&M partner should have adequate financial capability to execute the contract.
- 2.5.4 Bids of bidders quoting as authorized representative of a **manufacturer who meets the above requirements** in full, can also be considered, provided:
- (i) the manufacturer furnishes a legally enforceable authorization certificate in the prescribed form at Attachment-3 Section-III, assuming full guarantee and O&M obligations as per GCC and SCC, for the goods offered; and
 - (ii) The bidder, as authorized representative, supplied, tested and commissioned minimum six (6) nos. similar air monitoring stations

either container based or otherwise in any one year of the last three years which should be in satisfactory operation with no adverse report for last two (2) year as on date of bid opening.

2.5.5 The bidder should furnish the information on all past supplied and satisfactory performance for both 2.5.1 and 2.5.4 (ii) above, in "Performance Statement" as per Attachment No. 8B & 8 C respectively of Section 3 and minimum two (2) no. documentary evidences (client certificates in favor of bidder or manufacturers of equipment) in support of the satisfactory operation of similar air monitoring stations, which is in use for last two (2) years in case bidder is manufacturer or for last one (1) year in case bidder is authorized representative.

2.5.6 The bidder or their associates with an O&M partner in India, (any authorized agency in India) should have well trained O&M personnel on its regular rolls as per following details To establish this bidder should enclose the curriculum vitae of following persons with required experience.

Sl. No.	Responsibility	No. of Persons	Minimum Qualification	Experience
1.	In-charge Monitoring Station	1	M.Sc./ Graduate Engg.	2 years
2.	Technical Assistant	1	Diploma in Electronics . C&I/Electrical/	2 years

2.5.7 The O&M partner shall furnish an undertaking regarding carrying out satisfactory O&M of CAAQMS covered in this document as per terms & conditions of the document on behalf of the bidder. This information is to be provided as per Attachment 5 & 9 of Section III.

2.6 Bidding Procedure

- (1) The Bidding will take two envelopes simultaneous Bidding procedure.
- (2) All bids shall be submitted simultaneously by the designated date and at the place specified in Sub-clause 7.2 in this instruction. The Technical Bid will be evaluated first and only the Bidders who's Technical Bids will have been found substantially responsive will be notified by the Board of the date and place to participate in the publicly opening of the Financial Bid in writing.
- (3) The envelop for Technical Bid shall consist of three (3) envelopes. The first envelope "A" will contain the Bid Security; the second

envelope "B" will contain the qualification documents, and the third envelope "C" will contain the technical specifications pursuant to Clause 5 of this Instructions.

- (4) The envelope for the Financial Bid shall consist of documents pursuant to Clause 6 of these Instructions.
- (5) The bidder must quote for complete scope of work in package. In case the bidder does not quote for complete scope of work, the bid shall be rejected at Techno-commercial evaluation stage.
- (6) The bidder shall bear all costs associated with the preparation and delivery of its bid, and purchaser will in no case be responsible or liable for those costs.

3. BIDDING DOCUMENTS

3.1 Issue of Documents

One complete set of the Bidding Documents will be issued to the eligible and interested Bidders against a non-refundable fee of Indian Rupees Ten thousand (10,000) in the form of demand draft in favour of Member Secretary, Jharkhand State Pollution Control Board, payable at Dhanbad. Bidding Documents requested by mail will be dispatched by registered speed post courier on payment of copy Rs. 10000/- Bidding documents requested by mail will be dispatched by registered/ speed post / courier on payment of an extra amount of **Rupees 1,000/-**

The same can be downloaded from the website of Jharkhand State Pollution Control Board (<http://www.jspcb.org>). In this case bid shall be accompanied along with a demand draft of Rupees ten thousand as cost of BOQ/tender document.

Bidding Documents are not transferable.

3.2 Confidentiality of Documents

All recipients of the Bidding Documents, regardless of whether the Bid is submitted or not, shall treat the details of the documents as private and confidential.

3.3 Check of the Bidding Documents

Upon receipt of the Bidding Documents, the Bidder shall check the number of pages and drawings and notify the Board of any missing or

duplicate pages and drawings or of any figures or words, which may be indistinct or ambiguous.

No claim will be admitted as result of the Bidder's failure to comply with the foregoing. The address for the contact is specified in Sub-clause 3.5 of this Instruction.

3.4 Contents of Bidding Documents

- (1) The Bidding Documents include :
Volume I

Invitation for Bids

SECTION I	INSTRUCTION TO BIDDERS
SECTION II	SCOPE OF WORKS
SECTION III	FORM OF TECHNO-COMMERCIAL BID
SECTION IV	FORM OF FINANCIAL BID
SECTION V	GENERAL CONDITIONS OF CONTRACT
SECTION VI	SPECIAL CONDITIONS OF CONTRACT

Volume II

Technical Specifications

- (2) Bidders must acquaint themselves with all the Bidding Documents embodied in Volume I and II. In order to familiarize with the Works, the Bidders should ascertain all particulars regarding the location and site conditions at their own expenses. No plea attributed to lack of information or insufficient information will be entertained at any time.

The Board shall reserve the right and privilege to settle the affairs in case any doubt may occur concerning the Bidding Documents.

3.5 Clarification of Bidding Documents

If a prospective Bidder has any doubt as to the meaning of any part of the Bidding Documents he may notify the Board for supplementary information and explanation in writing or facsimile in compliance with Form of Questionnaire of Attachment 1 in Section III at the following address at least seven (7) days before the closing date of the bid.

**Member Secretary
Jharkhand State Pollution Control Board
HEC TA Division Building, Dhurwa, Ranchi (Jharkhand)
Ph- 0651-2400902/2400851**

3.6 Amendment of Bidding Documents

- (1) At any time prior to the deadline for submission of the Bid, the Board, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, may modify the Bidding Documents by amendment.
- (2) All prospective Bidders who have received the Bidding Documents will be notified of the amendment in writing at the address contained in their letter of request for issue of bidding documents and will be binding on them. The Owner will bear no responsibility or liability arising out of non-receipt of the same in time or otherwise.
- (3) In order to allow prospective Bidders reasonable time in which to take amendment into account in preparing their Bids, the Board at its discretion may extend the deadline for submission of the Bid.

4. PREPARATION AND SUBMISSION OF BID

4.1 Language

The Bid to be prepared by the Bidders, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Board or the Consultant shall be written in English. Failure to comply with this may disqualify a bid.

4.2 One Bid Per Bidder

Each Bidder shall submit one Bid only.

4.3 Local Representation

- a) Foreign Bidders, if they have in India a local representative in Indian / Indian agent, shall indicate in their bid (Bid Proposal Sheets), the name of such person of firm and also shall furnish the following information in their bid:
- 1) The precise relationship between the Bidder and his Indian Agent.
 - 2) The mutual interest which the Bidder and the Indian Agent have in business of each other.
 - 3) Any payment which the Indian Agent receives in India or abroad from the Bidder whether as a commission for the Contract or as a general retainer fee.
 - 4) Indian Agent's Income Tax Permanent Account Number.
 - 5) Bidder's Income Tax Permanent Account Number.
 - 6) All services to be rendered by the Indian Agent whether of general nature or in relation to the particular contract.
- 7) All above statements have to be substantiated by authenticated documents from competent authority.
- b) Agent's commission, if any, (to be included in the Bid Price) shall be indicated separately but as a part of Bid Price and the same will be payable only in equivalent Indian Rupees. Indian agent's commission will not be subject to any escalation whatsoever and will be payable at the time of final payment after commissioning & training. To effect such payments, the Indian Agent's commission will be calculated on the basis of exchange rates (State Bank of India T T Exchange buying rate) as on the date of notice of the award to the successful Bidder.
- c) The bidder/Contractor shall not pay Indian Agent's Commission, unless declared in the bid.

4.4 Bid Security / Earnest Money

- (1) Pursuant to Clause 5.1 in this instructions, the Bidder shall furnish, as

part of its Bid, his Bid Security in the amount of Indian Rupees one lakh sixty thousand only of quoted value in the form of Bank draft , in favour of Member Secretary, Jharkhand State Pollution Control Board, payable at Ranchi.

- (2) Bid securities in the form of Bank Draft shall be valid for one hundred sixty five (165) days from the date of opening of Techno-commercial Bids. This Bid Security shall provide security for the due performance by the Bidder of the obligations and undertakings in the Bid on his part contained.
- (3) The Bid Security shall be submitted through Crossed bank draft in favour of Member Secretary, Jharkhand State Pollution Control Board payable at Ranchi, from a reputed Indian Bank.
- (4) Any Bid not secured by the Bid Security will be rejected by the Board as non-responsive pursuant to Sub-clause 8.4. Unsuccessful Bidder's Bid Security will be discharged or returned as promptly as possible, but not later than thirty (30) days from the expiration of the period of the Bid validity specified in Sub-clause 4.6 hereunder. The successful Bidder's Bid Security will be discharged upon the Bidder signing the Contract pursuant to Sub-clause 13.3 in this instructions and furnishing the Performance Security pursuant to Clause 14 in this instruction.
- (5) The Bid Security may be forfeited :
 - a. If a Bidder withdraws its Bid during the period of Bid validity specified in Sub-clause 4.5 hereunder;
 - b. If a bidder refuses to accept the arithmetical corrections made according to ITB (Instructions to the Bidder) Clause No. 11;
 - c. In case of a successful Bidder, if the Bidder fails to sign the Contract in accordance with Sub-clause 13.3 in this Instructions and furnish Performance Security in accordance with Clause 14 in this Instructions;
 - d. In case bidder refuses to withdraw, without any cost to the Owner, those deviations, which the bidder did not state in the Deviation Schedules.
- (6) **No interest will be payable by the Board on the above Bid Security.**

4.5 Validity of Bid

The bid shall remain valid and binding on the Bidder for one hundred Twenty (120) days from the final time and date for submission of the Bid. Bid validity for a shorter period shall be rejected by the Board as non-responsive.

In exceptional circumstances, the Board may in writing or by facsimile, solicit the Bidder's consent to an extension of the period of the Bid validity. If the Bidder agrees to the request for extension, the Bid Security shall also be extended for an equivalent period of time.

Any Bidder may refuse to extend the validity of his Bid without forfeiting his Bid Security, but the Bid will not be considered.

Bidders granting the requests for extension of the Bid validity will not be required or permitted to modify their Bids.

4.6 Modification and Withdrawal of Bid

- a) The Bidder may modify or withdraw its Bid after the Bid's submission; provided that written notice of the modification or withdrawal is received by the Board **prior to the deadline prescribed for submission of Bids.**
- b) The bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of clause 5 & 6 for Techno-commercial and financial bid respectively, with the outer and inner envelope additionally marked "MODIFICATION" or "WITHDRAWAL", as appropriate. A withdrawal notice may also be sent by fax but must be followed by a signed confirmation copy.
- c) No Bid shall be allowed to be modified subsequent to the deadline for submission of Bids.
- d) No bid shall be allowed to be withdrawn in the interval between the deadline for submission of Bids and the expiration of the period of bid validity specified in the clause 4.7 above. Withdrawal during this period may result in the forfeiture of the bid security pursuant to clause 4.4 (5) (a).

4.7 Rejection of Bid

Failure by the Bidder to comply with the provisions of these Instructions to Bidders or any part of the Bidding Documents may result in rejection of the Bid and forfeiture of the Bid Security.

The Board reserves the right to accept or reject any or all Bids or to amend the Bidding process at any time prior to award of the Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Board's action.

The Board also reserves to itself the right of accepting the whole or any part of the Bid and the Bidder shall be bound to perform the same at the rate quoted.

4.8 Contacting the Board

Except for responses to request for clarification of the Bid by the Board, the Bidder shall not contact the Board for any matter related to this Bid from the time of submission of the Bid until the Contract is awarded.

Any efforts by the Bidder to influence the Board in his decision in respect of evaluation of the Bid or award of the Contract shall result in the rejection of the Bid and forfeiture of the Bid security.

5 PREPARATION OF TECHNO-COMMERCIAL BID

5.1 Contents of Envelop "A", Bid Security

The Bidder shall enclose his Bid Security in the sealed envelop marked "A" and "ORIGINAL" or "COPY" pursuant to sub-clause 4.4 in this Instructions. The Bidder shall prepare and submit one (1) original and one (1) copy.

5.2 Contents of Envelop "B", Qualification Documents

Following documents shall be prepared in one (1) original and one (1) copy and be enclosed in the sealed envelope clearly

marked "B" and "ORIGINAL" or "COPY" with the indication of the contents.

- 1) Authorization letter authorizing the signatory of the Bid to commit the Bidder.
- 2) Attachments in support of meeting qualifying requirements as per Clause No. 2.5 for the quoted packages (Attachments 8A, 8B & 9 of Section-III).
- 3) Copy of certificate of local branch, sales, residential and representative office(s) of the Bidder in India as per certificate from pursuant to Attachment 2 of Section III.
- 4) Certificate of letter of authority from manufacturers for all the Equipment (Attachment 3 of Section III).
- 5) Certificate from manufacturer stating the country of origin of each Equipment duly authenticated by competent authority of that country (Attachment 4 of Section III).
- 6) Certificate of carrying out O&M by O&M Partner (Attachment 5 of Section III).
- 7) List of Equipment offered (Attachment 6 of Section III).
- 8) List of Manufacturers of the equipment offered (Attachment 7 of Section III).
- 9) Pre-requisite for installation of equipment offered (Attachment 11 of Section III).

5.3 Contents of Envelop "C"; Techno-commercial bid including Technical Specifications and Catalogs

The following documents shall be enclosed in the sealed envelope marked "C" and "ORIGINAL" or "COPY" with the indication of the contents. The Bidder shall prepare one (1) original and one (1) copy.

- 1) Attachments 1 & 2 of Financial Bid, Section IV.
- 2) Deviation Schedule (Attachment 12 of Technical Bid, Section-III).
- 3) Technical Data sheets of the Equipment in the package (Annexure-I, Vol. II) offered:
 - a) In case that there is no deviation from the Board's requirement, the Bidder must write down "complied" in the column for "Bidder's Response" and it is not necessary to rewrite the same words of the requirements.

- b) In case of any deviation from the requirement the Bidder must write down the "not complied" & the deviation in blanks under "Bidder's Response".
- c) The Bidder shall clearly indicate contents and quantities of standard accessories for the proposed Equipment in the blanks.
- d) The Bidder shall understand that decision of the Board will be binding in regards of anything not specifically mentioned in the technical specification.
- e) The Bidders shall offer only one manufacturer, one brand and one model.
- f) Complete set of original catalogues and/or photographs and/or pamphlets illustrating principal feature.

6. PREPARATION OF FINANCIAL BID

6.1 Preparation of Financial Bid

The Bidder shall enter a price or rate against all the forms specified in the following Sub-clauses from 6.2 to 6.5 and Attachments in Section IV.

6.2 Bid Form

The Bid Price to be quoted by the Bidder shall be prepared on the official letter head of the respective Bidder according to the Attachment 1 "Bid Form" in Section IV without any alteration or change.

The Bid Price shall be quoted for performing the Contract strictly in accordance with the Technical Specifications.

The Bid Price quoted by the Bidder shall be firm during the Bidder's performance of the Contract and not subject to variation on any account.

A Bid Price submitted with an adjustable price will be treated as non-responsive and will be rejected/

6.3 Summary of Bid Price

Summary of Bid Price shall be prepared and submitted in accordance with the Attachment 2 in Section IV.

The Bidder shall indicate prices for the package in the following manner:

- (i) For the Goods Supplied from Foreign Origin
 - 1. CIF Price at Port of de-embarkment.
 - a) FOB Price of the Package (for the equipment to be supplied from Foreign Origin)
 - b) Freight for complete Package
 - c) Insurance covering all risks up to Port of de-embarkment
 - 2. Local Costs
 - a) Port handling and clearance charges.
 - b) Transportation cost from the port of Port of de-embarkment to Sites.
 - c) Insurance covering all risks from Port of de-embarkment up to handing over.
 - d) Installation and commissioning.
- (ii) For the Goods Supplied from India
 - a) The price of the Equipment quoted ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of the Equipment quoted ex-works or ex-factory.
 - b) Price for handing and inland transportation, insurance up to handing over the equipment at Site and other local costs up to delivery of the Equipment to each Site.

- c) Installation and commissioning
 - d) Price of other incidental cost, if any. Then the Bidder shall specify the same.
- (iii) Price of other incidental cost such as Indian Agent's Commission, if any. The Bidder shall specify the same.
 - (iv) Cost of O&M of CAAQMSS for Six (6) years including insurance.
 - (v) Training

The Bidder shall quote the price for the training as indicated in clause 10 of S/W.

Cost of Travel, Boarding & Lodging and local transport cost of participants shall be borne by JSPCB.

Note :

- (1) Quoted cost O&M of a CAAQMS for each year should be at least 12% of the cost of supply & installation of the CAAQMS. In case the bidder quotes O&M cost lower than 12% of the supply & installation cost, the Owner will reduce the supply & installation cost suitably, so as to make the O&M cost as 12% of the supply & installation cost, keeping the total quoted cost as unchanged.
- (2) All the local taxes & duties in the State of India i.e. Custom Duty, Excise duty, Sales Tax, Entry Tax, etc. which will be payable on the Equipment if the Contract is awarded shall be paid extra as actual by board.
- (3) Service tax as applicable shall be paid extra as actual the Board.

6.4 Bid Price Breakup

The Bidder shall prepare and submit the Bid Price Breakdown (CIF Price or Ex-works price as applicable) for each item of the quoted package(s) in accordance with Attachment 3 in Section IV.

The Bidder shall prepare and submit break up of Operation & Maintenance of CAAQMS as per Attachment 3A in Section-IV.

6.5 Currencies of Bid :

The unit rates and the prices shall be quoted by the bidder separately in any one of International trading currencies for the equipment, which the bidder proposes to supply.

7. COMPLETION AND SUBMISSION OF BID

7.1 Completion of Bids

7.1.1 Techno-commercial Bid

- (1) The Techno-commercial Bid shall not contain any information regarding Bid Prices and other financial matters except the Bid Security pursuant Clause 4.4 in this instruction.

7.1.2 Financial Bid

The Bidder shall submit separate outer envelop (Envelop 'D') for each package, enclosing the sealed inner envelopes of one (1) original and one (1) copy of the price bid(s) prescribed at Sub-clauses 6.2, 6.3, 6.4 and 6.5 and clearly marked "ORIGINAL" or "COPY". All the envelopes shall be clearly marked as follows and then be sealed.

- 1) Board name
- 2) Project Name and Reference No. of the Package
- 3) Financial Bid
- 4) Bidder's Name
- 5) Submission Date
- 6) Contents

7.1.3

- (1) In case of discrepancy between "ORIGINAL" and "COPY" bids prepared pursuant to clause 5 & 6 in this instruction, the "ORIGINAL" shall govern.
- (2) The original and the copy of the Bid shall be typed or printed in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. All pages of the Bid except for un-amended, printed literature, shall be initiated by the person(s) signing the Bid.

- (3) Any interlineations, erasures or over writing shall be valid only if they are initialed by the person or persons signing the bid with official stamp. A list of such occurrences are to be brought out in separate sheet including Section number. Clause number and Page number and submitted along with the respective envelope of Techno-commercial and/or financial bid.
- (4) The Bid shall be signed by the Bidder himself or for and on behalf of the Bidder by an officer or officers with authorization letter as the case may be. A notarized copy of such Power of Attorney shall be submitted with the Bid pursuant to Clause 5 in this instruction.

7.2 **Submission of Bid**

If the outer envelopes of the Techno-commercial Bid and Financial Bid are not sealed, Bid will not be accepted.

All the documents for the Techno-commercial Bid and Financial Bid shall be submitted to the address and at the time & Date designated by the Board as follows:

**Member Secretary
Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi (Jharkhand)
Phone- 0651-2400902/2400851
Fax- 0651-2400850**

Time By 13:00 Hrs. on Date-12.02-2011

The Bids received after the specified time and date here above for whatever reason shall be declared 'late" and rejected and returned unopened to the bidder.

Considering difficulties with document transportation, it is strongly suggested that the Bid shall be delivered by hand and the Bidder assumes all responsibilities for his Bid reaching address specified, prior to the time specified.

Bids in the form of Telex, facsimile, telegraph or email, will not be accepted. Only the complete documents specified above, received at the place and time will be considered.

The Bids once opened shall not be returned to the Bidders regardless of the result of the Bid. This will apply to both the Techno-commercial and financial bids in case a bidder is not qualified at the stage of Techno-commercial evaluation.

8. OPENING AND EVALUATION OF TECHNO-COMMERCIAL BID'

8.1 Opening of Technical Bid

Only the Technical Bid will be opened in public at **3.00 P.M.** on the dated 12.02.2011 at the place specified in Sub-Clause 7.2 here above. Bidders or their representatives may attend the opening.

During opening of the Techno-commercial Bid, the Bidder's name, the presence or absence of necessary envelopes, withdrawals of the Bid and such other details as the Board at their discretion may consider appropriate will be announced and recorded.

All the Bidders or their representatives present shall sign a format evidencing their attendance.

8.2 Confidentiality of the Process

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of the contract shall not be disclosed to bidders or any other person not officially concerned with such process. Any effort by a bidder to influence the Board's processing of Bids are award decisions may result in the rejection of the Bidder's Bid. The request for clarification and response shall be writing or by fax, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Board in the evaluation of the bids in accordance with the clause 11.2 of these instructions.

8.3 Clarification of Techno-commercial Bids

To assist the Techno-commercial examination and evaluation of bids, the Board may, at its discretion ask the bidder for a clarification of its Techno-commercial bid. All responses to

request for clarification shall be in writing, and **no change in the price bid shall be sought, offered or permitted.**

8.4 Preliminary Examination

The Board will examine the Techno-commercial Bids to determine whether they are complete, whether the documents have been properly signed and whether the Techno-commercial Bids are generally in order. **Any Techno-commercial Bid found to be non-responsive for any reason i.e. non-conformity of bid security, or not meeting the eligibility criteria and/ or qualifying requirements pursuant to clause 2.4 & 2.5 of ITB etc. will be rejected by the Board. No further Techno-commercial evaluation shall be carried out for such bidders.**

Prior to detailed evaluation of Techno-commercial bids, pursuant to clause 8.5, the Board will determine the substantial responsiveness of each Bid to the Bidding Documents including acceptable quality of goods offered pursuant to clause 2.4 & 2.5. A substantially responsive Bid is one, which conforms to all terms and conditions of the Bidding Documents without material deviations, objections, conditionality or reservations. A material deviation, objection, conditionality or reservation is one (i) that affects in any substantial way the scope, quality or performance of the contract; (ii) that limits in any substantial way, inconsistent with bidding documents, the Owner's right or the successful Bidder's obligations under the Contract; or (iii) whose rectification would unfairly affect the competitive position of other Bidder's who are presenting substantially responsive bids.

No deviation, whatsoever, is permitted by the Owner to the provisions relating to the following clauses (important Conditions):

- (a) Bid security (ITB Clause 4.5)
- (b) Resolution of Disputes (G.C.C clause 37),
- (c) Applicable law (G.C.C clause 42),
- (d) Taxes & duties (G.C.C Clause 38),
- (e) Performance security (ITB Clause 14 & GCC Cl.28),
- (f) Force Majeure (G.C.C Clause 35).

A bid with deviation to any of the above clauses (important Conditions) will be liable to be rejected.

The Owner's determination of bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence. If a bid is not substantially responsive, it will be rejected by the Owner, and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

8.5 Evaluation of Techno-commercial Bid

- (1) The Board will determine the responsive Techno-commercial Bids for the invitation of opening of Financial Bid if the Techno-commercial Bid meets satisfactorily technical specification and any other information, which they consider relevant to his offer.
- (2) If a Bidder is found not substantially responsive to the technical requirement, the Techno-commercial Bid will be rejected and the subsequent information as to opening of the Financial Bid will not be notified.
- (3) If the Techno-commercial clarifications are required by the Board to any part of the Techno-commercial Bids, the Bidders will be requested to clarify the same in writing.

8.6 Evaluation Criteria of Techno-commercial Bid

The Bidder who fulfill the requirements specified under Qualification Requirement (**Clause 2.5**) will be short listed. Under the Qualification Requirement a minimum threshold limit has been set for each parameter like technical experience and financial strength. Bidders not meeting the minimum threshold limit in any of these parameters will not be short-listed.

The detailed techno-commercial evaluation to be carried out shall be restricted to these short listed Bidders only.

9. NOTIFICATION OF SUCCESSFUL TECHNO-COMMERCIAL BID

After completing the techno-commercial evaluation of the Techno-commercial Bid first, the Board will notify in writing the

pre-qualified and techno-commercially responsive Bidders, of the date and venue for the opening of the Financial Bid.

10. OPENING OF FINANCIAL BID

The Bidders to whom the opening time, date and venue for the Financial Bid are notified by the Board in writing will be invited to attend the Financial Bid opening. The Bidder's representatives present shall sign a format evidencing their attendance.

During opening of the Financial Bid, the Bidder's name, quoted price of package and other details as the Board, as its discretion may consider appropriate will be announced and recorded.

11. EXAMINATION OF FINANCIAL BID

11.1 After opening of the Financial Bid, the Board will examine them to determine whether they are complete, signed, generally in order and substantially responsive to the Bidding Documents or not.

A Financial Bid determined as being not substantially responsive will be rejected.

The Board may waive any minor informality or non-conformity or irregularity in a Financial Bid which does not constitute a major deviation or reservation provided such waiver does not prejudice or affect the relative ranking of any Bidder.

If there is any discrepancy between words and figures, the amount in words will prevail.

The Financial Bid which is incomplete or conditional will be rejected.

The Financial Bid shall not be returned to the Bidder regardless of the result of the Bid.

11.2 During examination of Financial Bid any **arithmetical errors** will be corrected as follows :

- a) If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected accordingly.
- b) The amount stated in the Form of Bid shall be adjusted by the Board in accordance with the above procedure for the correction of errors and, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, its bid will be rejected, and the bid security will be forfeited in accordance with clause 4.5 (5)

12. EVALUATION AND COMPARISON OF FINANCIAL BID

12.1 Evaluation Procedure

The Board will evaluate the Bid previously determined to be Techno-commercially responsive pursuant to clause 8.6. The Board reserves the right to reject any bid or bids received at its discretion without assigning any reason whatsoever.

12.2 The purchaser's evaluation of a bid will take into account following factors:

I. Total cost of supply, installation & commissioning at Dhanbad of the equipment as below:

- 1) The CIF port of entry price of the equipment to be offered from abroad including price of consumables & spare parts.
- 2) The ex-factory / ex-warehouse / off-the shelf price of the equipment to be offered from within India (such price include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the equipment)
- 3) Local costs i.e.

- a. Cost of port handling and custom clearance,
 - b. Transportation cost from Port of de-embarkment to Sites,
 - c. Insurance from Port of de-embarkment up to handing over and
 - d. Installation and commissioning charges at site.
- 4) Other incidental costs, if any (such as Indian agent's commission)

II. O&M cost (including insurance) for five years as Net Present Value discounted @12% per annum.

NOTE:

- **Taxes and duties shall not be considered for the purpose of evaluation.**

12.3 The Board will evaluate and compare Bid for complete package.

12.4 The rate of exchange for evaluation

To facilitate evaluation and comparison, the Owner will convert all Tender prices to Indian Rupees at the BC selling exchange rate as determined by the State Bank of India, on the date of opening of Techno-commercial Bids.

12.5 Clarification on Financial Bid

For the purpose of examination, evaluation and comparison of the Financial Bid, the Board may at his discretion request the Bidder in writing to clarify his Financial Bid, but no change in the Bid Price or substance of the Bid will be sought, offered or permitted.

12.6 Cost Compensation for deviations

Deviations specifically declared by the bidders in respective Deviation Schedule (Attachment 12 of Technical Bid, Section – III) only will be taken into account for the purpose of evaluation.

In case of any of these deviations are not acceptable to the Owner, the Bid shall be rejected.

In case any of the deviations are acceptable to the Owner, the Owner will make its own assessment of the cost of these deviations and consider it for evaluation for the purpose of ensuring fair comparison of bids.

Bidders may note that all deviations / variations and additional conditions etc. found elsewhere in the bid other than those stated in the Deviation Schedules, save those pertaining to any rebates, shall not be given effect to in evaluation and it will be assumed that the bidder complies to all the conditions of Bidding Documents. In case bidder refuses to withdraw, without any cost of the Owner, those deviations, which the bidder did not state in the Deviation Schedules, the bid shall be rejected and the bid security of the bidder may be forfeited.

13 AWARD OF CONTRACT

13.1 Award of Contract to Successful Bidder

The Board will award the Contract to successful Bidder:

1. Whose Bid will be determined to be substantially responsive to this Bidding document and who will be determined by the Board, to be qualified technically, financially and otherwise in respect of such other capabilities, as the Board may be deem necessary and appropriate to satisfactory performance of the Contract and
2. Whose Bid will be determined to be lowest evaluated, responsive Bid and is determined to be qualified to satisfactorily perform the contract.
3. The Board reserves the right to reject any bid or bids received at its discretion without assigning any reason whatsoever.

13.2 Notification to Award

Prior to the expiration of the Bid validity pursuant to sub-clause 4.6 in this Instructions, the Board will notify the successful Bidder in

writing by registered letter or by facsimile to confirm that its Bid has been accepted.

The notification of award will constitute the formation of the Contract.

Upon the successful Bidder's furnishing of the Performance Security pursuant to Clause 14 the Board will promptly notify each unsuccessful Bidder and will discharge their Bid Security pursuant to Sub-Clause 4.5.

13.3 Signing of Contract

Within thirty (15) days of the receipt of notification of award from the Board, the successful Bidder shall sign and date of Contract.

The Contract shall take the form of General and Special Condition attached to Section V, VI and such modifications as may be necessary.

The Bidder shall prepare at his own cost one (1) original and three (3) bound copies of the Contract including the Contract Form attached to the Special Conditions of Contract (Attachment 3 of Section VI) for distribution to the parties concerned.

14. PERFORMANCE SECURITY

Within thirty (30) days of notification of award from the Board, the successful Bidder shall furnish the Performance Security in the form of bank guarantee issued by a reputable bank (as per enclosed list of Attachment – 15) having license to do business in India in accordance with Attachment 2 "Performance Security Form" provided in Special Conditions Contract for an amount equivalent to 3 % of the Contract Price, for one year after successful commissioning of system.

Failure of the successful Bidder to comply with the requirement of Sub-clause 13.3 or Clause 14 in these instructions shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security in which event the Board may make the award to the second high ranked Bidder or call for new Bids.

15. EXPENSE OF BID

Under no circumstances will the Board be liable to the Bidder for any expenses, losses or damages whatever incurred in the Bid including but not limited to expenses, losses or damages associated with preparation of the Bid, visits to the Sites and all matters in connection with the Contract negotiations and signing regardless of the conduct or outcome of the bidding process.

16. RESPONSIBILITY FOR INFORMATION SUPPLIED

Prior to the final time and date for submission of the Bids, no representation, communication, explanation or statement, verbal or written, made to the Bidder or anyone else by the Bidder or any of their employees or authorized representatives other than as may be set out in amendment issued in accordance with Sub-clause 3.6 in this Instructions shall bind the Bidder in the exercise of their powers and duties under the Contract.

The information given in the Bidding Documents is the best in the possession of the Board, but the Board does not hold himself responsible for its accuracy.

VOLUME I

SECTION II

SCOPE OF WORKS

1.	Details of Project Structure
2.	Scope of Services
3.	Minimum Specifications
4.	Desired Output for AAQMS Equipment
5.	Data Management AMD Quality checks
6.	Location
7.	Supply of Equipment
8.	Installation of Equipment
9.	Inspection and Test
10.	Provision of Training
11.	Operation & Maintenance of Air Monitoring Stations
12.	Schedule
	Attachment 1 Equipment List
	Attachment 2 Protocol Manual Calibration
	Attachment 3 Daily Reporting Format for Metreological Parameters ...
	Attachment 4 Monthly Reporting Format for Metreological Parameters..
	Attachment 5 Daily Reporting Format for Main Pollutants

1.0 DETAILS OF PROJECT STRUCTURE

(a) Successful Bidder would be awarded the project/work under a Supply and Service Agreement, which would entail

1. Supply, installation and Commissioning of One Set of CAAQMS Equipment
2. Operation and Maintenance of the CAAQMS Equipment for a period of 5 years from the date of it's the commissioning.
3. Daily reporting of data pertaining to Ambient Air Quality to JSPCB

JSPCB would make payment for CAAQMS as per schedule of requirement , for Supply, Installation and Commissioning of the system. JSPCB would procure all the CAAQMS equipment on its name JSPCB and make regular payments for the supply of Data at the end of each Quarter. The bidders therefore need to quote two prices for;
(a) Supply Installation and Commissioning of the System and;
(b) reporting of data to JSPCB. The price for the data supply would include the Operation and Maintenance, including electricity, manpower, security etc.

JSPCB would provide land for installation of CAAQMS free of cost, in Dhanbad to the Successful Bidder. Along with the land, JSPCB would provide basic amenities like telephone and electricity connections at the proposed location. JSPCB would bear the initial installation cost for these facilities and the monthly/recurring cost pertaining to their usage (monthly telephone and electricity bill) would be borne by the Successful Bidder.

One no. of Day light & Night visible data display system is to be supplied, installed and maintained initially for five years. JSPCB would identify location for installation of Day light & Night visible data display system. JSPCB would provide telephone and electricity connections at the identified location. JSPCB would bear the initial installation cost for these facilities and the monthly/recurring cost pertaining to their usage (monthly telephone and electricity bill) would be borne by the Successful Bidder. However all other installation requirement for Display System are to be arranged by the successful bidder and cost for same should be included in bid price.

(b) SCHEDULE OF REQUIREMENTS

The CAAQMS shall have the following schedule of requirement. The system should be complete in functional. Any balance of material not specified but required for the purpose must be supplied by the bidder.

Schedule No.	Brief Description	Qty. in nos.
1.	Continuous Automatic Air Quality Monitors analyzers for CO, SO ₂ , NO _x , NH ₃ O ₃ and Beta Gauge PM Monitor with PM 2.5 and PM ₁₀ Heads.	1 unit each
2.	BTX Monitor/ Analysers	1 Unit*
3.	Multicalibration systems for gaseous monitors comprising of gas supply/generation and automated calibration	1 Unit
4.	Meteorological Instrumentation comprising Wind Direction, Wind speed, vertical wind speed, Ambient temperature, Relative humidity, Solar Radiation, Barometric pressure mounted on telescoping crank- up meteorological tower	1 Set
5.	Computer system consisting of one Pc along with Laser Printer and Data Acquisition System (DAS) at the monitoring station and one PC at central office with peripherals and software for date acquisition/ display/ transfer and system integration	1 Lot
6.	Modem	2 Units
7.	Recommended spares and supplies	01 Lot
8.	Data display system	1 Unit
9.	Housing with foundation for Continuous Automatic Monitoring Stations	1 Unit

10.	UPS, 15 KVA (4 hrs. back-up)	1 Unit
11.	Split Air Conditioners (2Ton or 4 unit 1 Ton capacity)	2 Nos.

2.0 SCOPE OF SERVICES

The Scope of Works under the package shall include:

- A) the supply including packing, transportation, insurance, custom clearance, port clearance and handling, inland transportation, inland transit insurance and delivery to site, installation, testing and commissioning of equipment and provision of training of JSPCB official.
- B) Operation & Maintenance of Air Monitoring Stations for a period of five (5) years from the date of commissioning of the station, which can be extended up to three (3) years at the mutually agreed rates and terms and conditions.
- C) Report of data pertaining to CAAQMS to JSPCB.
- D) On line transfer of data to JSPCB & up linking of data to website of JSPCB & CPCB.

Other services involved with performance of the Works are specified in General and Special Conditions of Contract of bid document.

3.0 MINIMUM TECHNICAL SPECIFICATIONS

The minimum technical specification requirements for the CAAQMS to be installed at Dhanbad are given in Volume – II (Technical Specifications) of bid document. However, the actual technical proposal can have higher or better technical performance parameters and the minimum specifications proposed should not be taken as a constraint on the upper side. The technical specifications given in Volume – II (Technical Specifications) of bid documents are descriptive and Selection Committee can consider technical proposals having similar specifications.

4.0 DESIRED OUTPUT FOR CAAQMS EQUIPMENT

The desired output requirements from the CAAQMS equipment to be installed at Dhanbad are given in Attachment 2 to 6 of Scope of work of bid document.

5.0 DATA MANAGEMENT AND QUALITY CHECKS

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

Successful bidder shall submit a Standard Operating Procedure for the air quality monitoring station to the Board before award of contract. This Standard Operating Procedure shall be approved by the Board prior to award. The Standard Operating Procedure shall contain the following:

- Operating procedures for all analyzers and meteorological sensors
- Calibration procedures
- Calibration schedule
- Maintenance procedures
- Maintenance schedule
- Data validation procedures

Data obtained from these calibration checks and copies of associated Quality Assurance and calibration documentation, shall be submitted to the Board along with the Air Quality Data.

Upon 24 hour notice from the Board once per year, Successful Bidder shall agree to submit to an audit of calibrations, conducted, using pre-approved US EPA methodologies, by a third party. Third party audit will be arranged by the Owner (JSPCB) by the agency decided by them, at their cost and bidder shall provide all necessary facilities to carryout required audit. The results of these audits shall be made immediately available to both the Seller and Buyer.

Operator shall participate in Proficiency Testing Exercise organized by reputed organization.

GENERAL GUIDELINES

Working Hours : The site for CAAQMS operation should be manned by the employees of the Successful Bidder for 24 hours a day. In addition the Successful Bidder would arrange for a security of the site and equipments through appointment for security agency (providing at least one security guards) throughout the day.

Insurance : Successful Bidder would bear the cost of insuring the equipment and facilities against any theft, fire and other applicable provisions during tenure of contract period including O&M with a copy to JSPCB of an appropriate amount.

6.0 LOCATION

The location of the Air Monitoring Station shall be at Mines Rescue Station , Dhansar, Dhanbad / or other location at Dhanbad decided by the Board.

7.0 SUPPLY OF EQUIPMENT

Attachment – 1, specifies the list of equipment in the package, quantity of equipment to be supplied, delivered and installed at Dhanbad.

8.0 INSTALLATION OF EQUIPMENT

a)All the necessary arrangements and adjustments for suitable installation and operation of the equipment shall be made by the Bidder.

b) Following are excluded from contractor's scope:
installation Electric Power supply.
installation Telephone connection.
Access to the location of the installation.

9.0 INSPECTION AND TEST

9.1 Unpacking Inspection

The Contractor shall inspect at Site whether all the Equipment are packed in conformity with the Equipment list and packing list without any damage immediately after arrival of the Equipment at each Laboratory.

9.2 Performance Test

The Contractor shall carry out the performance test for all the Equipment supplied under the scope of work of this document.

In case the Equipment for performance test requires the supplemental and/ or supporting Equipment, the Contractor shall carry out the performance test including such Equipment.

10.0 PROVISION OF TRAINING

The supplier shall provide the training to the Board staff at JSPCB Dhanbad for ten (10) days to ten (10) persons after the performance test and commissioning. Training should include but not limit to the following:

- 1) Inspection of the Equipment.
- 2) Precautions in use of the Equipment.
- 3) Basic measurement principle.
- 4) Principles of operation of the Equipment.
- 5) Start-up and shutdown procedure.
- 6) Operation of the Equipment.
- 7) Calibration method.
- 8) QA/QC.
- 9) Data management and software application.
- 10) Safety precautions.
- 11) Basic maintenance procedure.
- 12) "Do's" and "Don'ts" in operation of the Equipment.
- 13) Handling of hazardous chemicals and gas.
- 14) Others, which are deemed to be necessary by the Supplier.

In case the Equipment for training requires the supplemental and/or supporting Equipment, the Supplier shall carry out the training including such Equipment.

The Supplier shall discuss and finalize the detailed contents and schedule of the training program in consultation with the Board during installation of the Equipment.

The Supplier shall furnish the training manual and/or CD as required for training for all the Equipment supplied under the scope of work of this document.

Contents of training manual and/or CD for the Equipment are as follows:

1. Principle of the Equipment.

1. Operation and calibration of the Equipment.
2. Maintenance and basic repair of the Equipment.
3. Safety instruction of the Equipment.
4. Others, which are deemed to be necessary by the Supplier.

11.0 **Operation & maintenance of Air Monitoring Stations :**

11.1 The Contractor's responsibilities shall include without limitations the following works to be carried out on the Air Monitoring Stations installed under this Contract during the Operation & Maintenance of the stations:

- a) Operation and Maintenance of all the commissioned equipments and amenities as supplied by the Manufacturer under the Contract including services during forced and planned outages and overhauls.
- b) The Contractor shall take over the entire Air Monitoring Station (including all equipment) for O&M after execution of Indemnity Bond as per format placed at Attachment- 12, Section III of bid document.
- c) The Contractor shall provide to the owner a monthly summary of all operation and maintenance activities performed by the contractor during each month.
- d) Operation and Maintenance Obligations:
In implementing its obligations to operate and maintain the facility under this Contract, the Contractor shall:
 - i) Undertake comprehensive maintenance including i.e. schedule and breakdown maintenance & repair at site and keep Board Informed regarding status of equipments and forward daily data as per Attachment 3 of Section – II.
 - ii) Obtain permission from the owner and inform the O&M for any assistance for which equipment is required to be sent to the works. Contractor shall arrange substitute equipment to keep CAAQM station operational.
 - iii) Take reasonable action to assure that the Personnel deployed at Air Monitoring Stations and any

subcontractors and agents are provided with a work place in compliance with applicable Law.

- iv) Keep the Air Monitoring Stations clean, well maintained and in good working condition.
- v) Security : It is the duty of the Contractor to secure the movable, immovable and other properties of the Owner at the Air Monitoring Station. The Contractor shall indemnify the loss caused to the Owner on account of any damage, loss or theft caused to the property of the Owner.
- vi) Scheduled Maintenance: Unless Owner and Contractor mutually agree otherwise, perform all required Scheduled maintenance for all equipment, auxiliaries etc., in accordance with the O&M specifications.
- vii) Unscheduled Maintenance : Perform all Unscheduled Maintenance and repairs for all equipment, auxiliaries etc. within (24) hours of the occurrence of the event requiring Unscheduled Maintenance, the operator shall provide the Owner with detailed written information on nature of the repair or replacement to be carried out, estimated down time and other necessary details as required.
- viii) The Contractor shall source all the spares required for maintenance & repairs of the installed equipment from O&M only.
- e) The Operator shall not:
 - i) Make any modifications as to the Air Monitoring Stations, other than in an Emergency, without the prior written approval of the Owner, or
 - ii) Dispose off any assets, settle law-suits or engage in transactions relating thereto on the Owner's behalf without the prior written approval of the Owner.
- f) The Contractor shall purchase spare parts, materials, supplies and other consumable items, and maintain an inventory thereof, for the Air Monitoring Stations. All such material supplied and other items shall be the property of the Contractor However all the spares shall be sourced from OEM's only.

- g) The Contractor shall review all applicable Laws and initiate and maintain such prosecution, procedures and operating plans relating to operation of the Air Monitoring Stations as are necessary to comply therewith or assist the owner in complying therewith as the case may be.
- h) The Contractor shall operate the equipment as per the laid out standards in the operating manual of the equipment and providing data for ambient air to JSPCB on daily basis in the suggested format.
- i) The CAAQMS has to be in operation for a minimum of 85% of the days in a year, 24 hours a day, and should not be inoperable for more than 7 days at a stretch.
- j) Provide data collected through operation of the equipments on daily basis in suggested output formats given in Attachment 3 to 6 of the bid document.
 - i) Establish and maintain a daily and monthly reporting system to provide storage and ready retrieval of operation and maintenance data including such information necessary to verify calculations. The monthly reporting shall contain variances from targets.
 - ii) provide access to the owner to the Air Monitoring Stations and its data at all reasonable times and as and when required.
 - iii) provide the operational data required to all competent authorities including, Government of India or concerned State Governments.
 - iv) On line transfer of data to JSPCB /CPCB web site.
- k) The Contractor shall ensure accuracy of the data provided as per standards.
- l) The contractor shall ensure periodic re-calibration of all the equipment as per manufacturer's instructions and maintain "Protocol Manual Calibration" as per Attachment 2 of Section II.

11.2 Owner shall arrange for the following and Contractor shall guide and assist the Owner:

- a) The Owner shall pay O&M charges at the end of each quarter to the Contractor, in accordance with the payment terms detailed in Special Conditions of Contract.
- b) Owner shall pay all fees including Service Tax, etc., imposed upon Owner by the Applicable Law.
- c) The Owner shall identify and hand over the site for erection & commissioning of Air Monitoring Stations free from all encumbrances.
- d) The Owner shall make the arrangement for electricity & telephone connection at the site. However monthly charges for both electricity and phone bill shall be borne by the Contractor.

11.3 **Handing Over of Station** :On expiry/closure/termination of the Contract Agreement, stations shall be handed over to Board in working condition to the satisfaction of Board. Few or all the spares procured by the Contractor and unused as on date of handing over may be purchased by the Owner at his discretion provided Contractor is able to provide reasonability of the costs of such spares. In addition the Contractor shall provide consumables equivalent to three months consumption on expiry/closure/termination of the Contract Agreement without any extra financial implication.

11.4 **Relocation of Station** :

During contract period, if Board intend to shift CAAQM station from one location of the city to another location, due to some reason – functional or otherwise, Bidder shall shift the CAAQM station for which cost of shifting including dismantling, loading & transportation, reinstallation at new location and construction of foundation will be made by the Board at a mutual agreed cost.

11.5 **Penalties:**

During O&M period, in case of any Analyses/ system failure, penalty will be charged by JSPCB @ Rs.1,000/- per day per Analyzer after a grace period of seven (7) continuous non-working days. The grace period of seven (7) continuous non-working days shall be given only once per quarter (3 months).

For a failure of total display panel, a penalty will be charged by JSPCB @ Rs.2,000/- per day after a grace period of two (2) continuous non-working days. The grace period of two (2) continuous non-working days shall be given only once per quarter (3 months).

Failure due to power outage and other Force Major conditions shall not be considered for levy of penalty.

Total penalty per year during O&M period on account of above conditions shall be limited to 15% of total O&M charges for one year.

In case penalty in the year exceeds 15% as above, the Contractor shall be required to replace the defective analyzer (s) or systems with new ones at his own cost, failing which the JSPCB shall have the right to terminate the O&M contract.

12.0 **SCHEDULE**

- 12.1 Contractor shall complete all activities covered in the scope of work up to installation & commissioning of Air Monitoring Stations within 180 days from date of opening of Letter of Credit.
- 12.2 The Contractor shall carry out Operation & Maintenance of Air Monitoring Stations for a period of five (5) years from the date of commissioning of the station, which can be extended up to three (3) years at the mutually agreed rates and terms and conditions.

Attachment 1

Equipment List

Schedule No.	Brief Description	Qty. in nos.
1	Continuous Automatic Air Quality Monitors analysers for CO, SO ₂ , NO _x + NH ₃ , O ₃ and Beta Gauge PM ₁₀ Monitors & PM 2.5 Monitor	1 unit each
2	BTX Monitor/ Analysers	1 Unit*
3	Multicalibration systems for gaseous monitors comprising of gas supply/generation and automated calibration	1 Unit
4	Meteorological Instrumentation comprising Wind Direction, Wind speed, vertical wind speed, Ambient temperature, Relative humidity, Solar Radiation, Barometric pressure mounted on telescoping crank-up meteorological mast.	1 Set
5	Computer system consisting of one Pc with core dual processor along with Laser Printer and DAS at the monitoring station and one server (IBM Compatible) with dual core with LCD (40'') at central office with peripherals and software for data acquisition/ display/ transfer and system integration	1 Lot
6	Modem	2 Units
7	Recommended spares and supplies	01 Lot
8	Data display system	1 Unit
9	Housing with foundation for Continuous Automatic Monitoring Stations	1 Unit
10	UPS, 15 KVA (4 hrs. back-up)	1 Unit
11	Split Air Conditioners (2K capacity)	2 Nos.

Equipment List

Sl. No.	Item/Analyzer Name	Quantity	Total Quantity in Nos. / Sets
1.	Monitoring Station (Container based) with required foundations.	1	1
2.	Air Conditioner, Split Type, make Hitachi/ Blue Star along with voltage stabilizer.(2 T cap)with four indoor unit or 1 Ton 4 split AC running two unit each alternately	2	2
3.	On line UPS ,15 KVA (4 Hrs back up)	1 unit	1 unit
4.	Sampling System having 10 port manifold	1 unit	1 unit
5.	19" Rack cabinet to accommodate all analyzers	3	3
6.	Ambient Oxides of Nitrogen (NO,NO ₂ ,NO _x) Analyzer with NH ₃	1unit	1unit
7.	Ambient Sulphur Dioxide (SO ₂) Analyzer	1unit	1unit
8.	Ambient Ozone (O ₃) Analyzer	1unit	1unit
9.	Ambient Carbon Monoxide (CO) Analyzer	1unit	1unit
10	Beta Gauge Automatic (SPM) Monitor (PM ₁₀ . + PM 2.5 Heads)		
11	BTX Monitor / Analyzer	1unit	1unit
12	Multi Calibration System for monitors / analysers	1unit	1unit
13	Portable Calibration Unit	1unit	1unit
14	Meteorological instruments for Wind Direction,Wind Speed, Vertical Wind Speed, Ambient Temperature, Relative Humidity, Solar Radiation & Barometric Pressure and Telescoping Crank - up Meteorological mast	1set	1set
15	Computer System consisting of one PC with core dual processor along with Laser Printer and DAS and one server with dual core processor at Central Office with peripherals and software for data acquisition/ display / transfer and systems integration.	1Lot	1Lot
16	Day light & Night visible data display system	1	1
17	Modem	2	2

Attachment 2

PROTOCOL MANUAL CALIBRATION

JSPCB/CAAQMS.....PROTOCOL NO..... DATE.....

NAME OF THE INSTRUMENT	CALIBRATION PARTICULAR				REMARKS
	ZERO	SPAN-1	SPAN-2	SPAN SOURCE VALUE	
SO ₂ ANALYZER					
NOX ANALYZER+ NH ₃					
CO ANALYZER					
O ₃ ANALYSER					
BTX ANALYSER					
PM ANALYSER					

* or as modified by Board.

VOLUME 1

SECTION III

FORM OF TECHNO-COMMERCIAL BID

SECTION III

FORM OF TECHNO-COMMERCIAL BID

CONTENTS

Attachment 1	Form of Questionnaire.....
Attachment 2	Certificate of O&M Partner of the Bidder in India
Attachment 3	Form of Letter of Authority.....
Attachment 3A	Form of Letter of Authority
Attachment 4	Form of Certificate of Country of Origin.....
Attachment 5	Form of Certificate of Carrying out O&M of CAAQM's By the O&M Partner in India.....
Attachment 6	Form of Equipment List.....
Attachment 7	Form of Manufacturers List.....
Attachment 8 A	Proforma for Final Capability for Bidder.....
Attachment 8 B	Proforma for Performance Statement for Manufacturer
Attachment 8 C	Proforma for Performance Statement for Authorized Representative of the Manufacturer.....
Attachment 9	Capability & Experience of O&M Partner.....
Attachment 10	Form of Bank Guarantee for Bid Security.....
Attachment 11	Form for Pre-requisites for Installation of equipment.....
Attachment 12	Deviation Schedule.....
Attachment 13	Indemnity Bond for Handing Over Air Monitoring Stations Including All Equipment to the O&M Contractor.....
Attachment 14	Scheduled Commercial banks (Bid Security).....
Attachment 15	^Scheduled Commercial Banks (Performance Secutiry)..

Attachment 1

<Letterhead of the Bidder>

FORM OF QUESTIONNAIRE

JHARKHAND STATE POLLUTION CONTROL BOARD PROJECT

BIDDING DOCUMENTS

FOR SUPPLY, INSTALLATION & COMMISSIONING

OF CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS (CAAQMS)
AND OPERATION & MAINTENANCE SERVICES FOR THIS CAAQMS AT DHANBAD

Date :

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO- Dhurwa, Ranchi (Jharkhand)**

From : Name of Bidder
 Address
 Name of Representative
 Position
 Fax No.
 Email id.
 Signature

Question

Attachment 2

<Letterhead of the Bidder>

CERTIFICATE OF O&M PARTNER OF THE BIDDER IN INDIA

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO- Dhurwa, Ranchi
(Jharkhand)**

Subject :- Certificate of Existence of Local Branch, Sales Residential and Representative Office(s) in India

1. Name of Office (s) :
2. Address :
Tel. No. :
Fax No. :
Telex No. :
Email id :
3. Status of Office(s) :
4. Date of Establishment of Office (s):
5. Name & Address of Residential Representative :
6. Total No. of years of association with OEM (Name of the manufacturer):
7. Total Manpower :
8. Total No. of trained Service Engineer :
9. Present No. of offices in India (Name the locations & address):
10. Total Turnover in last 3 years:
11. Major job in Hand :

12. Experience in O&M contract:

Sl.No.	Name of Client and Address, Phone No.etc.	Description of Contract (Brief scope of contract)	Year of Placement of Order	Present Status

Signature

Name :

Designation :

Seal :

**Attachment 3
FORM OF LETTER OF AUTHORITY**

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO- Dhurwa, Ranchi -834 004
(Jharkhand)**

Name of Manufacturer

Subject :- Letter of Authority from Manufacturer

Dear Sirs,

We, (Name of Manufacturer), a manufacturer duly organized and existing under the law of (Country Name) with its principal office of business as (Address) hereby make, constitute and appoint (name of Bidder), a company duly organized and existing under the laws of (Country Name) with its principal office of business at (Address) to be our true and lawful attorney in fact to do the following sets and deeds:

To present and bind us in the for Supply and O&M of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for JSPCB at Dhanbad in the State of Jharkhand, India, regarding the supply and installation of the following equipment proposed in the bid which we manufacture or produce.

Item No.	Name of Equipment

We, as a manufacturer bind ourselves as co-worker of the bid and are jointly and severally responsible for the compliance of the said bid and once (Name of Bidder) has been selected as a successful bidder, we shall manufacture, delivery and install the equipment in accordance with the

terms and conditions of contract with (Name of Bidder) and the Jharkhand State Pollution Control Board.

We hereby give and grant to the said (Name of Bidder) full power and authority to do and perform all and every act and thing whatsoever, requisite necessary and proper to be done in the premises, as fully, to all intents and purposes as we might or could do with full power of submission and renovation hereby ratifying and conforming all that (Name of Bidder) or its duly authorized representative shall lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, we have hereto signed this document on -----
2010.

ACCEPTED ON -----, 2010

NAME OF BIDDER
MANUFACTURER

NAME OF ISSUING

(Name of duly authorized
representative to sign and signature)

(Name of duly authorized
representative to sign and signature)

(Rank of position and department)

(Rank of position and department)

Attachment 3A
<Letterhead of the Manufacturer>
**FORM OF CERTIFICATE OF SUPPLY OF SPARES AND CONSUMABLES BY
MANUFACTURER**

Date :

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)**

Sub:- Certificate of Supply of Consumables and Spare Parts by Manufacturer

This is to certify that we (Name of Manufacturer) shall supply the consumables and spare parts of the equipment mentioned below during O&M period under the contract (contract detail) to the contractor (Name of the contractor)/Owner.

It is hereby guaranteed that we shall maintain stocks of consumables and spare parts for the following equipment for a period of Eight (8) years after the commissioning of the equipment in India.

Item No.	Name of Equipment	Name of Manufacturer

Signature:

Name of Person:

Position:

Name of Manufacturer:

Office Seal of Manufacturer:

Legal Address of Manufacturer:

Attachment 4

<Letterhead of the Manufacturer>

FORM OF CERTIFICATE OF COUNTRY OF ORIGIN

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)**

Name of Manufacturer

Subject:- Certificate of Country of Origin

We, (Name of Manufacturer), hereby certify that our equipment for procurement and installation of equipment for JSPCB laboratories in the State of, India is to be manufactured in the country mentioned below:

Item No.	Name of Equipment	Country of Origin

Signature

Name of Person

Title

Name of Manufacturer

Legal Address

Attachment 5

<Letterhead of the O&M Partner>

FORM OF CERTIFICATE OF CARRYING OUT O&M OF CAAQMS's BY THE O&M PARTNER IN INDIA

Date:

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)**

Sub:- Certificate of carrying out O&M of CAAQMS's by the O&M partner in India.

This is to certify that we <Name of O&M Partner> hereby agree to carry out day to day Operation and maintenance of the one (1) CAAQMS installed and commissioned by <Name of the main bidder> for minimum of five years from the date of installation & commissioning of the CAAQMS at the rates quoted by <Name of the main bidder> against this tender, strictly in accordance with terms & conditions contained in this bid document.

Signature:

Name of Person:

Position:

Name of O&M Partner:

Name Seal of O&M Partner:

Legal Address of O&M Partner in India:

Counter-signed by main bidder

Name of Person:

Position:

Name of the Bidder:

Office Seal of Bidder:

Legal Address of Bidder:

Attachment 8 A
PROFORMA FOR FINANCIAL CAPABILITY OF BIDDER
(for a period of last three years)

Bid No. ----- Package Code ----- Date of Opening -----
 Time -----
 Name of the Bidder

Year	Currency	Turnover
2007-2008 financial year		
2008-2009 financial year		
2009-2010 financial year		
Average		

Note:

1. The annual turn over amount is to be supported by annual report.

Signature of the Authorized Representative
 Name of the Person
 Position

Attachment 9

CAPABILITY & EXPERIENCE OF O&M PARTNER

Name and address of the O&M Partner in India (if applicable):

Sl. No.	Name of the O&M personnel proposed to be deployed	Educational Qualification	Experience in no. of years in carrying out O&M of CAAQMs.	Detail curriculum Vitae Attached (YES / NO)
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				

Attachment 10

FORM OF BANK GUARANTEE FOR BID SECURITY

(To be stamped in accordance with Stamp Act, if any, of the Country of the issuing Bank)

Bank Guarantee No.-----

Ref. No.:-

Date :-----

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO- Dhurwa, Ranchi- 834 004 (Jharkhand)**

Dear Sirs,

WHEREAS----- (hereinafter called "the Bidder") has submitted its bid dated ----- for Supply and O&M of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for JSPCB at Dhanbad (hereinafter called "The Bid")

KNOW ALL MEN by these present that WE----- of having our registered office at ----- (hereinafter called "The Bank") are bound unto Jharkhand State Pollution Control Board, India (hereinafter called "The Board") in the sum of ----- (amount as per bid document in Indian Rs. or US \$, both in words and figures), for which payment well and assign, by these presents. Sealed with the common seal of the bank this----- day ----- of 2010.

THE CONDITIONS of this obligation are:

1. If a Bidder withdraws / modifies its Bid during the period of Bid validity specified in Sub-clause 4.6 hereunder;
or
2. If the bidder having been notified of the acceptance of its bids by the board during the period of bid validity:
 - a. fails or refuses to execute the Contract Form, when requested ;
or
 - b. fails or refuses to furnish the Performance Security, in accordance with the Instruction to Bidders.
or
3. In case bidder refuses to withdraw, without any cost to the Owner, those deviations, which the bidder did not state in the Deviation Schedules.

We undertake to pay to the Board up to the above amount, according to, and upon receipt of, its first written demand, without the Board having to substantiate its demand, provide that in its demand the Board will note that the amount claimed by it is due to it owing to the occurrence of one or all of the three above stated conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto one (1) year after commissioning of entire system.

[NAME OF BANK]
By-----
(Title)
Authorized Representative

(Signature of Witness)

Name of Witness -----

Address of Witness-----

Attachment 11

PRE-REQUISITES FOR INSTALLATION OF EQUIPMENT

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)**

Dear Sir,

Following are the pre-requisites for installations of the equipment offered by us, which are required to be provided by you prior installation of the equipment:

Package no. / Item No.	Name of the Equipment	Installation & commissioning pre-requisites*

Signature of the Authorized Representative
Name of the Person
Position

Note:

Attachment 12

**SUPPLY, INSTALLATION & COMMISSIONING OF CONTINUOUS AMBIENT AIR
QUALITY MONITORING STATIONS (CAAQMS) AND OPERATION &
MAINTENANCE SERVICES FOR CAAQM AT DHANBAD FOR JSPCB**

(Deviation Schedule)

Bidders Name & Address

To :

**Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)**

Dear Sir,

Subject:- Deviation Schedule.

We declare that the following are the only and exhaustive deviations, variations from, exceptions and exclusions to the Bidding Documents for Services as outlined in your Technical Specifications for the subject package. Except these deviations, subject to the approval and acceptance by you, the entire work shall be performed as per your specifications and documents. Further, we agree the additional conditions, if any found elsewhere in the offer other than those stated below, save that pertaining to any rebates / discount offered, shall not be given effect to :

Equipment Code No.	Vol./ Clause Ref. / Page No.	As Specified in the Bid Documents	Deviation and Variations to the Bid document

Date :

(Signature)

Place

.....
(Printed Name)

.....
(Designation)

.....
(Common Seal)

Attachment 13

INDEMNITY BOND FOR HANDING OVER AIR MONITORING STATIONS INCLUDING ALL EQUIPMENT TO THE O&M CONTRACTOR

This Indemnity Bond is made this Day of 2011.....
By.....a Company registered under the Companies Act, 1956 /Partnership firm / Proprietary concern having its registered office at
(hereinafter called as "Contractor" or "obligator" which expression shall include its successors and permitted assigns) in favour of **Jharkhand State Pollution Control Board**, with Office at HEC TA Division Building, PO-Dhurwa, Ranchi-834 004 (Jharkhand), which term shall include permitted assigns and successors, (hereinafter called "JSPCB" which expression shall include its successors and assigns).

Whereas JSPCB has awarded to the Contractor, a contract for O&M of the one no. of Continuous Ambient Air Monitoring Stations (CAAQMS), located at Dhanbad , vide its Letter of Indent/Award Letter/ ContractNo..... dated (hereinafter called the "Contract"), in the terms of which Contractor shall be responsible for the Equipments to be handed over to it by JSPCB for the purpose of performance of the Contract (hereinafter called the "Equipments").

Now, therefore this Indemnity Bond witnessed as follows:

1. That in consideration of various Equipments as mentioned in the Contract, valued at Rs. (Rupees.....) to be handed over to the Contractor for the purpose of performance of the Contract, the Contractor hereby undertakes to indemnify and shall keep JSPCB indemnified, for the full value of the Equipment. The Contractor hereby acknowledges receipt of the Equipments as per details in the Schedule appended hereto.
2. That the Contractor is obliged and shall remain absolutely responsible for the safe custody of the Equipments at Continuous Ambient Air Monitoring Stations (CAAQMS) belonging to JSPCB against all risks whatsoever till the Equipments are duly used in accordance with all terms of the Contract. The Contractor undertakes to keep JSPCB harmless against any loss or damage that may be caused to the Equipment.
3. The Contractor undertakes that the Equipments shall be used exclusively for the performance/ execution of the Contract strictly in accordance with its terms and conditions and no part of the Equipments shall be utilized for any other work or purpose whatsoever.

It is clearly understood by the Contractor that non-observance of the obligations under this Indemnity Bond by the Contractor shall inter-alia constitute a criminal breach of trust on the part of the Contractor for all intents and purposes including legal / penal consequences.

4. That JSPCB is and shall remain the exclusive Owner of the Equipment free from all encumbrances, charges or liens of any kind, whatsoever. The Equipments shall at all times be open to inspection and checking by Project-in-Charge JSPCB shall always be free at all time to take possession of the Equipments in whatever form the equipments may be. If in its opinion, the equipments are likely to be endangered, misutilised or converted to uses other than those specified in the Contract, by any act of omission or commission on the part of the Contractor, he binds itself and undertakes to comply with the direction or demand of JSPCB to return the Equipments without any demur or reservation.
5. That this Indemnity Bond is irrevocable. If at any time any loss or damage occurs to the Equipments or the same or any part thereof is misutilised in any manner whatsoever then the Contractor hereby agrees that the decision of the Project-in-Charge of JSPCB as to assessment of loss or damage to the Equipments shall be final and binding on the Contractor. The Contractor binds itself and undertakes to replace the lost and / or damaged Equipments at its own or remedy that may be available to JSPCB against the Contractor under the Contract and under this Indemnity Bond.
- 6 Now the condition of this Bond is that if the Contractor shall duly and punctually complies with the terms and conditions of this bond to the satisfaction of JSPCB, then the above bond shall be void, but otherwise, it shall remain in full force and virtue.

In witness whereof, the Contractor has hereunto set its hand through its authorized representative under the common seal of the company, the day month and year first above mentioned.

SCHEDULE NO. 1

Particulars of the Equipments handed over	Quantity	Value of the Equipment	Signature of Authorised Person

For and on behalf of
M/s.....

Witness I

1. Signature
2. Name
3. Address

Name
Signature
Designation
Authorized representative

Witness II

1. Signature
2. Name
3. Address

(Common Seal)
(In case of Company)

Attachment 14

**SCHEDULED COMMERCIAL BANKS (BID SECURITY)
SBI AND ASSOCIATES**

NATIONALIZED BANKS having Branch in Ranchi

Attachment 15

SCHEDULED COMMERCIAL BANKS (PERFORMANCE SECUTIRY)

NATIONALIZED BANKS having Branch in Ranchi

VOLUME I
SECTION IV
FORM OF FINANCIAL BID

SECTION IV
FORM OF FINANCIAL BID

CONTENTS

Attachment 1 Bid Form.....

Attachment 2 Summary of Bid Price.....

Attachment 3 Bid Price Breakup Equipment of Foreign Origin (CIF Price)...

Attachment 3A Bid Price Breakup For O&M of CAAQMS's for Five Year

Attachment 1

<Letterhead of the Bidder>

Date:

Grant no.:-----

Bid No. -----

BID FORM

TO: JHARKHAND STATE POLLUTION CONTROL BOARD, RANCHI

Gentlemen :

1. Having examined the Bidding documents for procurement, installation & commissioning and Operation & Maintenance of CAAQMS's at one (1) locations in Dhanbad for JSPCB (herein after referred to as "the Works"), including, but not limited to, the Instructions to Bidders, Scope of Works, General and Special Conditions of Contract, Technical Specifications, Schedules, Attachments, Amendment Nos. we, the undersigned, offer to execute and complete the whole of the works and remedy any defects therein, in conformity with the said Bidding Documents for the sum of International trading currency (in figures.....) for the equipment including all other charges as mentioned in the document, supplied from Foreign Origin and Indian Rupees..... (INR.....) for the incidental costs incurred in India (if any) as may be ascertained in accordance with the Summary of Bid Price and Bid Price breakup attached herewith and made part of this bid.
2. We undertake, if our Bid is accepted, to complete and deliver the whole of the Works comprised in the Contract within the time specified in the contract, subject to the said conditions.
3. If our Bid is accepted, we will obtain the guarantee of a bank in a sum equivalent to ----- percent of the Contract Price for the due performance of the Contract, in the form prescribed by the Board.

4. We agree to abide by this Bid for a period of One hundred twenty (120) days from the final date of the submission of Bid fixed in sub-clause 7.2 of the Instruction of Bidders, and shall remain bidding upon us and may be accepted at any time before the expiration of that period.
5. Unless and until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof, shall constitute a binding Contract between us.
6. We understand that you are not bound to accept the lowest of any bid you may receive, and that you will not defray any expense incurred by us in bidding.

Date this-----day of ----- 2010.

Signature ----- in the capacity of -----

Duly authorized to sign Bid for and on behalf of -----

(IN BLOCK CAPITAL) -----

Address -----

Facsimile number -----

Telephone Number -----

Email id. -----

WITNESS -----

Address -----

Occupation -----

Attachment 3A

BID PRICE BREAKUP FOR O&M OF CAAQMS'S FOR FIVE YEARS

Sl. No.	Year of O&M	Service charges for O&M in Rs.		Cost of material including spares & consumables for Operation & maintenance and other incidental expenses i.e. electricity, and telephone & Insurance charges in Rs.		Total Charges for the year in Rs.	
1.	1 st year						
2.	2 nd year						
3.	3 rd year						
4.	4 th year						
5.	5 th year						
TOTAL							

NOTE:

- A. SERVICE TAQX SHALL BE PAYABLE ONLY ON THE SERVICE PORTION OF O & M COST ONLY (EXCLUDING SUPPLY OF SPARES FOR MAINTENANCE & OVERHAULING).
- B. COST OF MATERIAL INCLUDING SPARES & CONSUMABLES FOR OPERATION & MAINTENANCE SHALL BE INCLUSIVE OF ALL TAXES & DUTIES.

VOLUME I

SECTION V

**GENERAL CONDITIONS
OF CONTRACT**

**SECTION V
GENERAL CONDITION OF CONTRACT
CONTENTS**

1.	Definitions
2.	Intent of Contract
3.	Performance of Works
4.	Use of Contract Documents and Information
5.	Location
6.	Language and Calendar
7.	Site Condition
8.	Country of Origin
9.	Specification of Equipment
10.	Consumables and Spare Parts (DELETED)
11.	Code and Standard
12.	Electrical Ratings
13.	Name Plate
14.	Packing & Marketing
15.	Shipment
16.	Protection and Safety
17.	Work Schedule
18.	Projection Formation
19.	Warranty / O&M Contractor
20.	Insurance
21.	Installation
22.	Inspection and Test
23.	Instruction (DELETED)
24.	Training
25.	Completion
26.	Submission of Documents
27.	Payment
28.	Prices
29.	Performance Security
30.	Assignment
31.	Subcontract
32.	Delays in the Contractor's Performance
33.	Liquidated Damages
34.	Suspension of Work
35.	Termination for Default
36.	Force Majeure
37.	Termination of Insolvency

38.	Resolution of Disputes
39.	Taxes and Duties
40.	Injury and Damage
41.	Royalty and Patents
42.	Effectiveness
43.	Laws and regulations
44.	Notices

GENERAL CONDITIONS OF CONTRACT

These conditions encompass all the Works to be executed and completed by the Contractor for the Project and as further defined herein.

1. DEFINITION

Unless the context of the General and-Special Conditions of Contract otherwise requires, the following terms wherever in the General and Special Conditions of Contract shall have the meaning defined hereunder.

Words imparting the singular shall also include the plural and vice versa where the context requires. Whether the words and phrases defined in this Clause are capitalized or not in the Contract shall not affect their meaning.

- 1.1 “The **Project**” or “The Works” means supply, installation & commissioning of equipments for Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and Operation & Maintenance of this CAAQMS at Dhanbad.
- 1.2 “The **Contract**” means the written agreement to be concluded between the Board and the Contractor and includes terms and conditions stipulated on the Bidding Documents and any other descriptions annexed thereto which form an integral part of the agreement to be provided by the Board.
- 1.3 “The **Contract Price**” means the price payable to the Contractor under the Contract for the full and proper performance of its contractual obligations for the Works.
- 1.4 “The **Equipment**” means all kind of materials, Machinery, Components, apparatus, articles and instruments for the Project to be provided by the Contractor to the, Board under the Contract.
- 1.5 “**GCC**” means the General Conditions of Contract contained in this Section.
- 1.6 “**SCC**” means the Special Conditions of Contract in Section VI of this Volume.

- 1.7 **“S/W”** means the Scope of Works in Section II of this Volume.
- 1.8 **“The Contractor”** means the firm supplying the Equipment and performing the Works in connection with the Project under the Contract and includes his personal representatives, successors and authorized assignees.
- 1.9 **“The Manufacturers”** means the firms, which produce the Equipment to be furnished by the Contractor under the Contract with the Board.
- 1.10 **“The Specifications”** means the specifications of the Works to be performed by the Contractor in conformity with those specified in both the Technical Specifications of Volume II and all other related documents in the Bidding Documents, and modifications thereof or additions thereto as may from time to time be made, and approved in writing by the Board through the Consultant in case of prior to the Contract and agreed upon by both the Board and the Contractor after the Contract.
- 1.11 **“The Sites”** means CAAQMS’s at Dhanbad as specified in Clause 1 of S/W (Section – II).

2. INTENT OF CONTRACT

- 2.1 The intent and spirit of the Contract is to provide all the details for the Works herein specified to be fully completed within the duration of the Contract.
- 2.2 It is hereby understood that the Contractor, in accepting the Contract, agrees to furnish any and everything necessary for such intent notwithstanding any omission in the Contract.

All matters omitted from the Contract which may reasonably be inferred to be obviously necessary for the efficient and stable completion of the Works shall be deemed to be included in the Contract and the Contractor shall be held responsible for any errors or losses which the Contractor may make due to such omissions as above.

3. PERFORMANCE OF WORKS

Unless otherwise provided for, the Works shall be performed by the Contractor in compliance with S/W, GCC, SCC and the Specifications

in this Bidding Documents issued by the Board and Contract to be concluded between the Board and the Contractor.

Unless otherwise agreed or stated, the Contractor shall bear all the cost and take all the responsibilities for the performance of all the Works.

4. USE OF CONTRACT DOCUMENTS AND INFORMATION

- 4.1 The Contractor shall not, without the Board's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample, or information furnished by or on behalf of the Board, Consultant and their authorized personnel and body in connection therewith, to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.
- 4.2 The Contractor shall not, without the Board's prior written consent, make use of any documents or information enumerated here above except for purposes of performing the Contract.
- 4.3 Any documents other than the Contract itself, enumerated in here above shall remain the property of the Board and shall be returned to the Board on completion of the Contractor's performance under the Contract if so required by the Board.

5. LOCATION

Jharkhand State Pollution Control Board, HEC Building, Dhurwa, Ranchi (Jharkhand). Is the final designated HQ of Equipments to be delivered by the Contractor, specified in Attachment 1 of S/W.

6. LANGUAGE AND CALENDAR

6.1 Language

All documents and correspondence related to the Contract shall be made in English.

6.2 Calendar

All dates, months, years and terms referred in the Contract shall relate with the Gregorian Calendar, unless otherwise mentioned specifically.

7. SITE CONDITION

7.1 Site Condition

The Contractor shall study the existing Site Conditions, referring to the Bidding Documents carefully in order to familiarize themselves with the Works. The Contractor should ascertain all particulars of the location and Site conditions at their own expenses.

7.2 Access to Site

The Board will give the Contractor access the Sites in order to perform the Works during the period of validity of the Contract unless otherwise provided.

8. COUNTRY OF ORIGIN

8.1 All the Equipment supplied under the Contract shall have their origin in the eligible countries.

8.2 For the purposes of this Clause, "Origin" means the place where the Equipment were produced or manufactured. The Equipment is produced or manufactured when, though manufacturing, processing, or substantial and major assembly of components, a commercially recognized new product results that is substantially different in basic characteristics in purpose or utility from its components.

8.3 The origin of Equipment is distinct from the nationality of the Contractor.

9. SPECIFICATION OF EQUIPMENT

9.1 Equipment

The Contractor shall supply all the Equipment specified in the package quoted as per the package wise Equipment List of Attachment 1 of S/W.

All the Equipment to be supplied under the Contract shall be new and unused.

9.2 **Specification of Equipment**

The performance, materials, duty, workmanship, operating conditions and design conditions for the Equipment shall meet and comply with the Specifications.

The Specifications indicate the principal and minimum technical requirements for each Equipment. The details of the Equipment shall be fully examined and suitably selected through the detailed engineering and design without sacrifice in quality of serviceability of the Equipment.

The figures of dimension and weight shown in the Specifications are indicatively presented as approximate figures. These figures may not necessarily and exactly be applied for the selection of the Equipment, but the Contractors shall meet the principal and minimum requirements shown in the Specifications. Any Bidder offering better specification than the minimum prescribed shall be considered as technically qualified.

10. **CONSUMABLES AND SPARE PARTS**

11. **CODE AND STANDARD**

11.1 **Code and Standard**

All the Equipment and the Works shall conform to the approved and authorized codes and standards of the origin country, the following standards wherever applicable and Indian Standard which are in force at the moment of the installation.

- Japanese Industrial Standard (JIS)
- Environmental Protection Agency of United States (U.S EPA) Standard
- International Organization for Standard (ISO)
- British Standard (BS)

Other internationally prevailing standards are accepted for the Equipment, unless otherwise indicated.

Even if some codes and standards are designated in the Specifications, the other codes and standards not shown therein are also applicable instead of the designated ones as far as they are equivalent to such designated codes and standards and meet the requirement thereof.

11.2 **Metric System**

All dimensions and performance of the Equipment shall be stated in metric system, unless otherwise specified in the Specifications.

12. **ELECTRICAL RATINGS**

12.1 **Electrical Rating**

The Equipment shall conform to the following ratings and standards wherever applicable.

- 1) All the electrically operated equipment specified herein shall be single phase, AC 220 V $\pm 10\%$ and 50 Hz, unless otherwise specified in the Specifications.
- 2) Electrical plugs for the Equipment shall conform to local regulations and standards.

12.2 **Precaution against Voltage Fluctuation**

Adequate automatic voltage regulator for the Equipment shall be arranged by the Contractor wherever indicated in the Specifications. The Contractor shall pay due attention to that electrical voltage fluctuation exerts a serious influence and damage upon functioning of the equipment.

13. **NAME PLATE**

Nameplate shall be affixed on a suitable place of the Equipment in accordance with the provision of SCC.

14. **PACKING AND MARKING**

14.1 **Packing**

- 1) Transportation by air cargo

The Contractor shall pack and transport the Equipment in the double carton, approved by airline and deliver separately to the designated Site in complete condition.

2) Transportation by vessel

The Equipment shall be packed and transported for seaworthy shipment in such a manner that they are carried to the Sites in complete condition. The packages shall be made shockproof, waterproof, moisture proof and any other protection against rough handling, exposure to extreme temperature, salt, precipitation, open storage and other severe tropical conditions during transit to each final Site. These Equipment shall be transported by container vessel and packed separately for the designated Site.

14.2 Marking

The outside of the package shall be marked in accordance with SCC in such a manner that they are clearly visible, protected against loss and resistance to external influences.

14.3 Packing List

Contents of each package and/or the Equipment shall be itemized on a detailed list showing the exact weight, and extreme outside dimensions of length, width and height of each package and/or the Equipment. One copy of the detailed packing list indicating name of components, assembly number and quantity which corresponds to those of the Equipment in each package shall be enclosed in each package.

Enclosed in one package, there shall also be a master packing list summarizing and identifying each individual package. Packing list shall be placed in a waterproof cover and secured against any external influence of the package.

15. SHIPMENT

15.1 Shipment

Shipment of the equipment from foreign origin shall be made as specified in SCC.

15.2 Shipping Documents

Promptly after shipment of equipment of foreign origin, the Contractor shall airmail the shipping documents to the Board in accordance with SCC.

15.3 **Unloading and Custom Clearance**

The Contractor shall arrange the clearing agent for unloading, customs clearance and storage of the equipment from the Foreign Origin, documentation and all the other procedures.

The Board will agree to assist the Contractor where required in obtaining clearance of the Equipment through the customs and provide exemption certificate, if required.

15.4 **Inland Transportation**

The Contractor shall be fully responsible for the delivery of all the Equipment to the Sites.

The Contractor shall arrange at his option and cost for the transportation from the port of entry to each Site for the equipment of foreign origin.

Transportation of Radioactive material if any shall be carried out by the contractor and contractor will statutory clearances for the same.

15.5 **Handling and Storage**

The Contractor shall protect the Equipment from any damage and avoid overloading. Particular attention shall be given to the perishable Equipment and those which must be kept dry, cool or from exposure to direct sunshine and moisture.

In case a part of the Board's facilities is necessary to be occupied by the Contractor for temporary storage or installation use, the Contractor shall obtain the written approval from the Board for temporary occupation and protect facilities against any damages. Charges payable for this facility to the Board for this shall be fixed by the Board.

16. **PROJECTION AND SAFETY**

The Contractor shall be totally responsible for all the reasonable precautions against fire in respect of the Works, temporary works, offices, storage yards and other places and things connected therewith.

The Contractor shall comply with all rules, regulations and orders which have been made by the Government of India, the Board or any other competent authority and the contractor shall provide sufficient fire-fighting protection in respect of the safety of the property and personnel of the Board.

17. **WORKS SCHEDULE**

The time schedule for the Works to be carried out by the Contractor is specified in SCC.

The Contractor shall complete the Works in accordance with the Works schedule specified here above.

18. **PROJECT FORMATION**

18.1 **Board**

The authorized personnel of the Board for the Project who is responsible for any coordination with the Contractor is

Member-Secretary,
Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)

Any correspondence to or authorization from the Board shall be made with the Member Secretary here above.

19. **WARRANTY / O & M CONTRACT**

19.1 All the CAAQMS's shall be under O&M Contract from the date of commissioning of the CAAQMS's. The details terms and conditions and scope of work during O&M Contract period shall be as specified in the Scope of Work, Section – II of this document.

19.2 However the Contractor shall warrant to the Board that the Equipment to be supplied under the Contract is new, unused, of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. This warranty includes all spare parts and services to keep the instruments and equipment in operating condition. In case O & M is not awarded / terminated the equipment shall remain warranted for 3 years.

The Contractor shall further warrant to the Board that the Equipment complies strictly with the Specifications and has no defect, arising from design, materials, or workmanship or from any act or omission of the Contractor, that may develop under normal use of the supplied Equipment in the conditions prevailing to the final Sites.

19.3 **Period of O&M Contract**

This O&M Contract shall remain operative for the period specified in SCC after the successful installation & commissioning of the stations by the Contractor.

19.4 **In Case of Faulty Equipment**

If any part of the Equipment breakdowns or fails due to faulty of improper design, materials, workmanship, manufacture, fabrications or instructions, or fails to meet the requirements of the Specifications, then the Contractor or his O&M partner shall promptly notify the manufacturer in writing of any claims arising under this clause.

Contractor or his O&M partner shall ensure that within the period specified in Scope of Work for O&M Contract in Section – II of the document and with all reasonable speed, the repair or replacement of the defective Equipment or improper parts thereof is carried out at the Contractor's expenses.

In the event that any part of the Equipment becomes defective due to no fault of the Contractor, such as voltage fluctuations, misuse and negligence, the Contractor will be indemnified by the Board in respect of repair thereof.

19.5 **Manufacturer's Warranty**

The contractor must take into account any manufacture's standard Warranty on the equipment supplied **before quoting for O&M cost for the years** for which such Warranty is applicable.

20 **INSURANCE**

The Equipment supplied under the Contract shall be fully insured in currency acceptable as per the existing Law of India against loss or damage incidental of manufacture or acquisition, transportation, storage, shipment, delivery, installation and training involved with the

Works naming the Board as the beneficiary, in the manner specified in the SCC, until issuance of taking over certificate.

21. **INSTALLATION**

21.1 All the Equipment shall be installed and brought into suitable conditions for operation by the Contractor at the Sites designated by the Board. The Contractor shall make all the necessary and proper adjustments and arrangements, including, but not restricted to, the utility supplies and connections, foundation and erection works specified in Clause 3 of S/W in order to install the Equipment in adequate conditions for operation.

All matters omitted from this Clause which may reasonably be incurred to be obviously necessary for the proper installation and operation of the Equipment shall be deemed to be included in this installation works, and the Contractor shall be held responsible for any errors or defects which the Contractor may make due to such omissions thereof.

21.2 Only the best installation practices are to be applied, and all the installation works must be done to the satisfaction of the Board and the Contractor shall carry out his works in a neat and proper workmanlike manner. The installation shall be planned and carried out in no way to damage installation materials and the Equipment.

21.3 All the installing Equipment, tools, materials, labour, logistics and all the other requirements for installation shall be provided by the Contractor.

21.4 Prior to the establishment of Equipment layout and installation plan, the Contractor shall verify, check and inspect the designs and specific site conditions of monitoring stations and laboratories where the Equipment are to be installed so as to make good arrangement for installation and utility assembly in consultation with the Board.

22. **INSPECTION AND TEST**

22.1 The Board shall have the right to inspect and the test the Equipment to confirm their conformity to the Specifications without any extra charge to the Board by the Contractor. The Contractor shall notify the Board and the Consultant in writing, in a timely manner (at least 21days in advance), of the schedule of inspections and test.

22.2 The inspections and test shall be conducted on the premises of the Contractor and/or the Manufacturers and the Sites. If conducted on the premises of the Contractor and/or the Manufacturers, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the Consultant for the inspections and test at no charge to the Board.

22.3 Should any inspected or tested Equipment fail to conform to the Specifications, the Board may reject the Equipment, and the Contractor shall either replace the rejected Equipment or make alternations necessary to meet the Specifications requirements free of cost to the Board.

22.4 No pre dispatch inspection is envisaged for equipment of foreign origin and contractor shall furnish factory test / inspection reports as furnished below of the manufacturer along with the dispatch documents. However, the Board reserves the right to appoint at its cost, any inspection agency (other than suggested by contractors) which will be binding on the contractor.

- Performance Test Certificate of all analyser/ UPS/ 1.2 mm pre-coated GI Sheet of container, NIST traceability for gas Aluminium cylinders / Permeation tube
- Certificate of Traceability
- Verification of System Completeness
- Product Certificate

22.5 For the equipment of Indian origin contractor should submit check list for equipment for approval of JSPCB. For container, contractor should take prior approval of the drawing from JSPCB. Contractor should notify date of pre-dispatch inspection to the JSPCB at least 15 (fifteen) days ahead of inspection.

22.5 The Board's right to inspect, test and, where necessary, reject the Equipment after the Equipment's arrival in India shall in no way limited or waived by reason of the Equipment having previously been inspected, tested and passed by the Board prior to the Equipment's shipment from the country of origin.

23. **TRAINING**

23.1 The Contractor shall provide the Board staff with the training as specified in Clause 5 of S/W for the Equipment & Technical Specification.

23.2 The Contractor shall furnish the schedule and program of the training to the Board within 30 days after the notification of award in such a manner that proper training is imparted to Board staff members.

24. **COMPLETION**

The Contractor shall complete all the Works by the date as specified in SCC.

24.1 **Taking Over**

Upon successful completion of delivery, installation, inspection and training of the Equipment to and at the designated Sites and O&M of the CAAQMS for the period specified in S.C.C., the Contractor shall notify the Board in writing that all the Works under the Contract have been completed at least 30 days before expiry of O&M Contract period.

Immediately after completion of O&M Contract period as specified in S.C.C., the Board will take over the stations or make alternate arrangement for their O&M.

25. **SUBMISSION OF DOCUMENTS**

The Contractor shall submit the documents specified in SCC to the Board. The Contractor shall prepare all the documents in English.

Besides the documents thereof, the Contractor shall submit the notices, reports, and other documents when deemed necessary, in accordance with the direction of the Board.

26. **PAYMENT**

26.1 **Payment**

The method, terms and conditions of payment to be made to the Contractor under this Contract shall be specified in SCC.

The Contractor's request(s) for payment for, as appropriate, the Equipment delivered and the Works performed and fulfillment of other obligations stipulated in the Contract shall be made to the Board in writing, accompanied by documents specified in SCC.

26.2 The payment shall be made promptly by the Board but in no case not later than sixty (60) days after submission of invoice or claim by the contractor.

26.3 **Currency of Payment**

The currency in which payment is made to the Contractor under this Contract shall be specified in SCC.

27. **PRICES**

Prices charged by the Contractor to the Board for the Equipment delivered and the Works performed under the Contract shall not vary from the prices quoted by the Contractor in the Financial Bid.

28. **PERFORMANCE SECURITY**

28.1 **Performance Security**

The Contractor within thirty (30) days from the date of notification of award shall furnish a Bank Guarantee from a reputed Indian or Nationalized Commercial Bank having license to do business in India to the Board in line with the enclosed form as per Attachment 2 Section VI towards performance guarantee for an amount equal to three (3) percent of the total Price under the Contract for faithful and due fulfillment by the Contractor of all obligations under the terms and conditions of the Contract.

The Contractor shall ensure that Contract Performance Security remains valid at one year after commissioning of entire system satisfactorily.

28.2 **Return of Performance Security**

The performance security will be discharged by the Board and returned to the Contractor not later than forty five (45) days after expiry of one year subject to date of completion of the Contractor's performance obligations under the Contract, including obligations, unless specified otherwise in SCC.

29. **ASSIGNMENT**

The Contractor shall not assign in whole or in part, its obligations to perform under this Contract, except with the Board's prior written consent.

30. **SUBCONTRACTORS**

30.1 The Contractor shall notify the Board in writing of all the Manufacturers awarded under this Contract and any other subcontractors involved with performance of the Works if not already specified in the Bid. Such notification, in the original Bid or later, shall not relieve the Contractor from any liability or obligation under the Contract.

31. **DELAYS IN THE CONTRACTOR'S PERFORMANCE**

31.1 **Delays in the Contractor's Performance**

Delivery of the Equipment and performance of the Works shall be made by the Contractor in accordance with the time schedule specified in SCC.

31.2 **Notification of Delay**

If at any time during performance of the Contract, the Contractor and/or the Manufacturers should encounter conditions impeding timely delivery of the Equipment and performance of the Works, the Contractor shall promptly notify the Board in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the Board shall evaluate the situation and may at its discretion extend the Contractor's time for performance, with or without liquidated damages, in which case the extension shall be ratified by the Board by amendment of the Contract.

31.3 **Liability of Liquidated Damages**

Except as provided under Clause 31.1 of GCC, a delay by the Contractor in the performance of its delivery obligations shall render the Contractor liable to the imposition of liquidated damages pursuant to Clause 32 hereunder, unless an extension of time is agreed upon pursuant to Sub-clause 32.2 here above without the application of liquidated damages.

32. LIQUIDATED DAMAGES

if the Contractor fails to perform the Works within the period specified in Clause 11 of SCC, the Board shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in SCC. Once the maximum is reached, the Board may consider termination of the Contract pursuant to Clause 35 of GCC.

33. SUSPENSION OF WORK

The Contractor shall not suspend the whole or any part of the Works without notice to the Board in writing. The Contractor thereupon shall do all possible endeavors to reduce any expenses or costs resulting from the suspension. Such suspension shall not nullify the Contract.

34. TERMINATION FOR DEFAULT

34.1 Termination for Default

The Board, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Contractor, may terminate this Contract in whole or in part:

- 1) If the Contractor fails to perform any or all of the Works within the period specified in Clause 11 of SCC, or extension thereof granted by the Board pursuant to Clause 32 of GCC
or
- 2) If the Contractor fails to perform any other obligations under the Contract.

34.2 Liability for Excess Cost for Unperformed Work

In the event the Board terminates the Contract in whole or in part pursuant to Sub-clause 35.1 here above the Board may procure at the risk and cost of the contractor, upon such terms and in such manner as it deems appropriate, the equipment / works similar to those undelivered / unperformed and the **Contractor shall be liable to the Board for any excess costs for such similar equipment / works**. However, the Contractor shall continue performance of the Contract to the extent not terminated.

35. **FORCE MAJEURE**

35.1 Notwithstanding the provisions of Clauses 32, 33 and 35 in GCC, the Contractor shall not be liable for forfeiture of its performance security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

35.2 For the purposes of this Clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the Board in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

35.3 If a Force Majeure situation arises, the Contractor shall promptly notify the Board in writing of such condition and the cause thereof. Unless otherwise directed by the Board in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

36. **TERMINATION FOR INSOLVENCY**

The Board at any time terminate the Contract by giving written notice to the Contractor if the Contractor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Board.

37. **RESOLUTION OF DISPUTES**

37.1 **Settlement of Disputes**

Any dispute(s) or difference(s) arising out of or in connection with the Contract shall, to the extent possible in the first instance be resolved amicably between the Contractor and the Owner's Engineer.

If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Contractor may give notice to the other party of its intention to

commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

In the case of dispute or difference arising between the Purchaser and a Domestic Contractor relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of (3) three arbitrators one each to be appointed by the Purchaser and the Contractor. The third arbitrator shall be chosen by the 2 (two) Arbitrators so appointed by the parties and shall act as Presiding arbitrator. In case of failure of the two arbitrator appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the President of the Institution of Engineers (India).

In case of a dispute with a Foreign Contractor, the dispute shall be settled in accordance with provision of UNCITRL (United Nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Contractor. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act as presiding arbitrator. In case failure of two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the President of the Institution of Engineers (India).

If one of the parties fails to appoint its arbitrator in pursuance of Sub-Clause (a) and (b) above, within thirty days after receipt of the notice of the appointment of its arbitrator by the other party, then the Presiding Arbitrator shall be nominated by President of the Institution of Engineers (India), both in case of the foreign contractor as well as Indian Contractor, shall appoint the arbitrator. A certified copy of the order of the President of the Institution of Engineers (India), making such an appointment shall be furnished to each of the parties.

Arbitration proceedings shall be held at New Delhi, India, and the language of the arbitration proceedings and that of documents and communications between the parties shall be English.

The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.

Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the President of the Institution of Engineers (India).

38. TAXES AND DUTIES

- a) Concessional Customs Duty (presently @5%) shall be applicable on the equipment being imported by Jharkhand State Pollution Control Board (JSPCB). Necessary exemption certificate shall be issued by JSPCB and applicable Custom Duty shall be paid by JSPCB.
- b) JSPCB is also exempted from paying Excise Duty. Necessary exemption certificate shall be issued by the JSPCB.
- c) Sales tax including VAT, Local taxes i.e. entry tax octroi etc. will be paid by JSPCB at actual against documentary evidence.
- d) Service Tax as applicable on incidental services like Installation, Commissioning and training and O&M service etc. shall be payable extra by JSPCB.

39. INJURY AND DAMAGE

39.1 Injury or Death of Persons

The Contractor shall be liable for and shall indemnify the Board against any liability, loss claim or proceedings whatsoever arising under any statute or law in respect of personal injury or death or any disability caused by the carrying out of the Works unless due to any act or neglect of the Board, or of any person for whom the Board is responsible.

Without prejudice to the Contractor's liability to indemnify the Board, the Contractor shall maintain and cause any manufacturers and subcontractors to maintain such insurance as necessary to cover the liability of the Contractor or, as the case may be, of such Manufacturers and subcontractors, in respect of personal injuries or deaths arising out of or in the course of or caused by the carrying out of the Works.

39.2 Damage to Property

The Contractor shall liable for and indemnify the Board against and insure and cause any Manufacturers and subcontractors to insure against any expense, liability, loss claim or proceedings in respect of any damage whatsoever to any real or personal property for any one occurrence in so far as such damage arises out of or in the course of or by reason of the carrying out of the Works and is due to any negligence, omission or default of the Contractor or any person for whom the Contractor is responsible or any Manufacturers and subcontractors or person for whom the Manufacturers and subcontractors are responsible.

40. ROYALTY AND PATENTS

40.1 The Contractor shall pay all royalties and licenses fees for the use of any patented item, whether it may be an invention, method, arrangement, article, process or appliance used in connection with the performance of the Contract. The Contractor shall indemnify and save harmless the Board against any and all costs, damages and expenses of any nature or kind whatsoever which may arise out of or result from a claim by any person, firm or corporation that the manufacture, purchase, use of sale of any of the inventions, methods, arrangements, articles processes or appliances used in connection with the performance of this Contract infringes any patent of such other rights. The Contractor shall, at the request of the Board, defend the Board against any suit brought to enforce any such claim at the Contractors expense.

40.2 In case any such patented item used on or in conjunction with the Works is in suit held to constitute and infringement of its use enjoined, the Contractor shall either secure for the Board the right to continue using the said item by suspension of the enjoinder, by procuring for the Board a license or otherwise, or will replace such items with a non-infringing item or modify it so that it becomes non-infringing or with the

Board's approval remove the said enjoined item and refund to the Board the sums paid thereof.

41. **EFFECTIVENESS**

This Contract shall come into force and effect on the date of the Letter of Award and shall be in force until the Works have been completed and all the payments have been made to the Contractor, including the payments for O&M contract period.

42. **LAWS AND REGULATIONS**

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

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

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

43. **NOTICES**

Any notice given by one party to the other pursuant to this Contract shall be sent to the other party in writing or by cable, telex, facsimile and confirmed in writing to the other party's address specified in SCC.

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

VOLUME I
SECTION VI
SPECIAL CONDITIONS
OF CONTRACT

SECTION VI

SPECIAL CONDITIONS OF CONTRACT

CONTENTS

1. Climate Condition
2. Consumables and Spare Parts
3. Name Plate
4. Marking
5. Shipment
6. Works Schedule
7. Warranty / O&M Contract
8. Insurance
9. Installation
10. Inspection and Test
11. Completion
12. Submission of Documents
13. Payment
14. Prices
15. Performance Security
16. Liquidated Damages
17. Notices

Attachment 1 Mode of Shipment of Equipment(DELETED).....
Attachment 2 Performance Security Form
Attachment 3 Form for Contract Agreement
Attachment 4 Proforma of Certificate for issue by the JSPCB
After Successful Commissioning of Equipment.....

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict the provisions herein shall prevail over those in the General Conditions of Contract the corresponding clause number of the GCC is indicated in parentheses, if applicable.

1. CLIMATE CONDITION

Precaution and protection against the specific climate conditions in India such as heavy rain, high temperature, high humidity, gales, excessive sunshine, flooding or any other climate conditions which could cause damage upon the Equipment or otherwise interfere with the execution of the works shall be taken. The Equipment to be supplied shall be tropicalized.

2. CONSUMABLES AND SPARE PARTS (GCC CLAUSE 10)

2.1 Supply of Consumables and Spare Parts

The Contractor shall provide the consumables and spare parts as per requirement of Operation & maintenance of CAAQMS Stations.

2.2 After Sales Services

The Contractor shall guarantee the availability of all consumables, spare parts, maintenance and repair work for each Equipment at cost basis for at least five (5) years after the O&M period specified in Clause 7 of SCC, unless otherwise specified in the Specifications.

Bidder should submit certificates from the manufacturers in support of available service centers and availability of spares parts and consumable in India as per Attachment no. 5 of Section III.

3. NAME PLATE (GCC CLAUSE 13)

The Contractor shall affix the name plate with the following description in English on all the Equipment:

- 1) Name of the station
- 2) Name of the Equipment
- 3) Manufacturing date

- 4) Production serial number
- 5) Equipment model number
- 6) Name of manufacturer
- 7) Ratings of the Equipment
- 8) Logo of JSPCB and CPCB

4. **MARKING (GCC SUB-CLAUSE 14.2)**

The Contractor shall mark the following information in the sequence described below and in a frame commensurate with the size of packing and/or the Equipment.

- 1) Consignee: Jharkhand State Pollution Control Board, Dhanbad, (Jharkhand) India
- 2) Name of the Works. Supply and O&M of Continuous Ambient Air Quality Monitoring Stations (CAAQMS) for JSPCB at Dhanbad
- 3) Name of the Project : Supply and O&M of Continuous Ambient Air Quality Monitoring Station (CAAQMS) for JSPCB at Dhanbad
- 4) Contract number
- 5) Contractors name
- 6) Port or airport of discharge
- 7) Country of origin
- 8) Item, and if applicable, package number in sequence, and quantity per package and/or Equipment
- 9) Description of Equipment
- 10) Net and gross weight and cubic measurement
- 11) Shipper's name and/or marks
- 12) Caution marks, if applicable

13) Other markings required by the Board

5. SHIPMENT (GCC CLAUSE 15)

The Contractor shall be responsible for the delivery of the Equipment to each Site designated by the Board and for the coverage of shipping charges, freight, insurance premiums up to handling over the Equipment at Sites, inland transportation and temporary storage.

5.1 Notification and Submission of Documents

Upon shipment, the Contractor shall notify the Board and the Insurance Company by cable of the following details of the shipment.

- 1) Contract number
- 2) Description and quantity of the Equipment
- 3) Name of vessel and air cargo
- 4) Number and date of bill of lading and airway bill
- 5) Date of shipment, port of discharge, expected date of departure and expected date of arrival
- 6) Invoice amount of shipment
- 7) Name of a claim settling agency in India.

5.2 The Contractor shall mail the following documents to the Board, with a copy to the Insurance Company.

(1) Equipment of Foreign Origin :

- 1) Four (4) Copies of the contractor's invoice showing the Equipment's description, quantity, unit price and total amount
- 2) Original and Four (4) copies of the negotiable, clean, on-board bill of lading marked freight prepaid and four copies of non-negotiable bill of lading;
- 3) Four copies of the packing list identifying contents of each package

- 4) Insurance certificate
- 5) Manufacturer and Suppliers warranty certificate
- 6) Factory test and inspection certificate

- 7) Certificate of country-of origin

The above documents shall be received by the Board at least one week before arrival of the Equipment at the port or place of arrival and. If not received, the Contractor will be responsible for any consequent expenses.

Partial shipment and transshipment is allowed.

(2) Equipment to be Supplied from within India:

Upon delivery of the Equipment to the transporters, the Supplier shall notify the Board and mail the following documents to the Board.

- 1) Four copies of the Supplier's invoice showing the Equipment's description, quantity, unit price and total amount
- 2) Acknowledgement of receipts of goods from the consignee i.e. receipted delivery note, railway receipt (RR), or truck receipt (LR)
- 3) Supplier's and/or Manufacturer's warranty certificate
- 4) Factory test & inspection certificate and Material Dispatch Clearance Certificate (MDCC) issued by the Board.
- 5) Insurance certificate
- 6) Certificate of country of origin

The above documents shall be received by the Board before arrival of the Equipment and, if not received, the Supplier shall be responsible for any consequent expenses.

6. WORKS SCHEDULE (GCC CLAUSE 17)

6.1 Equipment to be supplied from Foreign Country:

Delivery Period for all the packages shall be **90 days from the date of the opening of Letter of Credit (L/C)**. It relates to completion of delivery on CIF (designated Sea Port / Air Port) basis for equipment of foreign origin. Further transportation to the site where the CAAQMS's is to be installed and commissioned shall be completed by the contractor **within Sixty (60) days** from the date of arrival of equipment at port of de-embarkment.

6.2 Equipment to be supplied from India:

All the equipment shall be received at Continuous Ambient Air Quality Monitoring Station Site (1 no.), within 90 days from the date of notification of award and are to be installed and commissioned within sixty (60) days from date of receipt at site.

6.3 Commissioning and other incidental services:

All the equipment of the awarded package shall be commissioned within **150** days after the date of opening of Letter of Credit (L/C) including all the incidental services i.e. training etc.

6.4 O&M Contract

The contractor shall carry out Operation & Maintenance of Air Monitoring Stations for a period of five (5) years from the date of commissioning of the station, which can be extended up to extended (5) years at all mutually agreed rates and terms & conditions.

7. WARRANTY / O&M CONTRACT (GCC CLAUSE 19)

7.1 Period of O&M Contract

The complete CAAQMS shall be under Operation & Maintenance Contract from the date of commissioning of the station and maintenance of all the equipment including supply of all material shall be the responsibility of the Contractor during the validity of Operation & Maintenance Contract. The Contractor shall, in addition, comply with the performance guarantees if specified under the Contract. If, for reasons attributable to the Contractor, these guarantees are not attained in whole or in part, the Contractor shall make such changes, modifications, and/or additions to the Equipment or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own costs and expenses and to carry out further performance test.

8. INSURANCE (GCC CLAUSE 20)

A) The insurance shall be in an amount of equal to One Hundred Ten (110) percent of the value of the Equipment up to handing

over of the Equipment to the Board on "All Risks" basis, including war risks and strikes, naming the Board as the beneficiary.

- B) The Contractor shall take the comprehensive all risk insurance cover for the complete station during O&M period including statutory insurance of Contractor's personnel. The value shall be 100% of the total value of the stations depreciated annually as per standard norms.

9. **INSTALLATION (GCC CLAUSE 21)**

Bidder shall depute Engineer / supervisor for on site assembly, installation, commissioning and start up of the supplied equipment. Bidder shall also furnish tools required for assembly, commissioning and maintenance of equipment during O&M period.

10. **INSPECTION AND TEST (GCC CLAUSE 22)**

10.1 **Unpacking Inspection**

Unpacking inspection shall be performed by the Contractor to inspect whether all the items and quantity of the Equipment have been delivered in conformity with the Equipment and packing list without any damage during the shipment.

The Contractor shall submit the unpacking inspection report to the Board.

10.2 **Site Inspection**

The Contractor shall carry out site inspection of the Equipment at each Site at the completion of installation works to confirm that the installation works and the function of the Equipment is satisfactory for the requirements specified in S/W and the Specifications.

The Contractor shall carry out the functional test to ensure that the consumables and spare parts are good for the operation, maintenance and replacement in future.

As a result of site inspection, the Equipment regarded as unsatisfactory or unacceptable by the Board shall be promptly remedied by the contractor. The Contractor shall submit the site inspection report to the Board and the Consultant.

10.3 Performance Test

The Contractor shall carry out the performance test to inspect and witness the function of each of the equipment supplied under the awarded package at site.

Performance test shall be carried out in accordance with Sub-clause 4.3 of S/W for all the Equipment supplied.

In case the Equipment for performance test requires the supplemental and/or supporting Equipment, the Contractor shall carry out the performance test including such Equipment.

Performance test will be considered to be complete only after successful completion of performance test of each equipment pertaining to respective packages.

In case of results of such performance test found to be unsatisfactory by the Board same shall be promptly reminded by the Contractor.

The Contractor shall prepare the performance test procedures for approval by the Board at least thirty (30) days prior to the testing schedules.

The Contractor submits the performance test report to the Board.

11. COMPLETION (GCC CLAUSE 24)

The Contractor shall complete all the Works up to installation and commissioning of CAAQMS's within 150 days after the date of opening of Letter of Credit(L/C).

12. SUBMISSION OF DOCUMENTS (GCC CLAUSE 25)

12.1 Work Program

Within thirty (30) days from the notification of award of the Contract, the Contractor shall submit the detailed Works program and schedule to the Board indicating the following items:

- a. Equipment supply program and Equipment layout plan (if applicable)

- b. Design drawings and utility list, if required
- c. Subcontractor list for installation work of the Equipment if not already specified in the Techno-commercial Bid
- d. Program for factory, pre-shipment, unpacking and site inspections and performance test
- e. Installation program including personnel organization chart of the Contractor.

The Contractor shall be responsible for any discrepancies, errors or omissions or delay in delivery and submission of the work program, and any expenses resulting there from shall be borne by the Contractor.

12.2 Other Documents

The Contractor shall submit the following documents within forty five (45) days after the notification of award.

Item	Number of Documents to be sent to JSPCB
Catalogues, product data and test reports	4
Installation manuals	4
List of consumables and spare parts	4
Manufacture's specifications	4
Training program	4

Besides the documents here above, the Contractor shall submit the following documents at the designated time for submissions as follows:

Item	Number of Document Board	Time of Submission
Inspection report	2	At the time of completion of factory, pre-shipment unpacking and site inspections (if applicable)
Training manual	10	At the time of commencement of installation of Equipment
Operation and maintenance manual	10	At the time of commencement of installation of Equipment

Training program	1	By the time of completion of installation of Equipment
Report of performance test	1	At the time of completion of performance test
Video CD (Optional)	1	By the time of commencement of training
List of Equipment supplied	2	At the time of completion of the Work

Besides the documents here above, the Contractor shall submit the notices, reports, and other documents when deemed necessary, in accordance with the direction of the Board.

13. PAYMENT (GCC CLAUSE 26)

13.1 Method of Payment

The payment shall be made in the currency specified in the contract by means of an irrevocable Letter of Credit for equipment against dispatch.

Other payment shall be made through cheque only.

13.2 Terms and Conditions of Payment

Bids with terms and conditions of payment other than that specified below shall be rejected.

(a) Payment for goods and services (excluding O&M charges) supplied from abroad:

- 1) **On shipment** :- Eighty (80) percent of the contract price of the Goods shipped shall be paid through irrevocable Letter of Credit opened in favour of the supplier in a bank in his country and upon submission of the documents specified in sub-clause 5.2 (1) of SCC including : (i) Packing list and (ii) Supplier's certificate that the amounts shown in the invoice are correct in terms of the contract and that all the terms and conditions of the contract have been complied with and

2) **On Final Acceptance:** Balance Twenty (20) percent of contract price of the equipment including 100% of the local costs, incidental cost, cost of training after satisfactory completion of installation & commissioning including Training (to be certified by the Board) of all the Equipment of the package at specified site(s) and submission of acceptance certificate as per Attachment 4 of SCC.

3) 100% Payment of local currency portion including agency commission shall be paid after satisfactory completion of installation & commissioning including Training (to be certified by the Board) of all the Equipment of the at specified site(s).

(b) Payment of goods and services (excluding O&M charges) supplied from India.

1) **On Delivery:** Eighty (80)% of the contract price shall be paid (through LC) on receipt of Goods and upon submission of the documents specified in Clause 5.2 (2) of SCC: and

2) **On Final Acceptance:** Balance Twenty (20) percent of contract price of the equipment including 100% of the local costs, incidental cost, costs of training after satisfactory completion of installation & commissioning including Training (to be certified by the Board) of all the Equipment of the particular package at specified site and submission of acceptance certificate as per Attachment 4 of SCC.

(c) Payment of Operation and Maintenance charges:

O&M cost of each year shall be paid after end of every quarter in equal installments based on submission of required air quality report along with data obtained from calibration documentation. Any penalties applicable if any as referred in Scope of Work for O&M Contract shall be deducted from the quarterly payment.

(d) 1) Where payments are to be effected through Letter of Credit (LC), the same shall be subject to the latest Uniform Customs and Practice for documentary credit, of the International Chamber of Commerce.

2) The LC will be confirmed at Supplier's cost if requested specifically by the supplier;

- 3) If LC is required to be extended/reinstated for reasons not attributable to the Purchaser, the charges thereof shall be to the suppliers account.
- 4) Any expenditure for the operation of LC out side India shall be borne by the beneficiary.

14. **PRICES (GCC CLAUSE 27)**

The prices quoted **shall be firm** throughout the tenure of the Contract. Any increased cost incidental to the performance of the Works due to any economic dislocation either in the origin country or India or to any other causes such as currency restriction, price hike of the Equipment, wage hike for labour or revaluation of the currency can not be claimed by the Contractor to the Board.

15. **PERFORMANCE SECURITY (GCC CLAUSE 28)**

15.1 **Performance Security**

The amount of performance security as a percentage of the Contract Price shall be ten (10) percent.

16. **LIQUIDATED DAMAGES (GCC CLAUSE 32)**

16.1 **Rate**

The Contractor shall pay to the Board as liquidated damages a sum equivalent to half (0.5) percent of the contract price of each station for per week of delay in commissioning of each station after scheduled date of completion.

16.2 **Maximum Deduction**

The total liquidated damages on account of delay in supplies payable to the Board shall not in any case exceed ten (10) percent of the Contract price of supply portion only (Excluding O&M charges).

16.3 In addition to above Liquidated damages for delay, the Contractor is liable to pay penalty on account of failure of systems during O&M period as elaborated in Section – II (Scope of work) of this document.

17. **NOTICES (GCC CLAUSE 43)**

Any notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the party to whom the communication is addressed or when sent by registered mail telex, telegram, facsimile to such party at the following address:

The Member Secretary,
Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)

Attachment 2

Form of Bank Guarantee for Performance Security

(to be stamped in accordance with Stamp Act, if any, of the Country of the issuing Bank)

Bank Guarantee No. -----

Date : -----

Ref. No.:-----

To,

Member Secretary,

Jharkhand State Pollution Control Board,

HEC TA Division Building, PO-Dhurwa, Ranchi 834 004

(Jharkhand)

Dear Sirs

THIS AGREEMENT is made on the -----days of----- 20 -----

Between [Name of the Bank] of ----- [address of the bank]

(hereinafter called "the Guarantor") of the one part and Jharkhand State Pollution Control Board of Jharkhand State Pollution Control Board, HEC TA Division Building, PO- Dhurwa , Ranchi (Jharkhand) (hereinafter called "the Board") of the other part.

WHEREAS

- (1) this agreement is supplemental to a contract number -----(insert Contract Number) (hereinafter called "the Contract") made between [name of Contractor] of ----- [address of Contractor] (hereinafter called "the Contractor) of the one part and the Board of the other part whereby the Contractor agreed and undertook to execute the works of Supply and O&M of Continuous Ambient Air Quality Monitoring Station (CAAQMS) for JSPCB at Dhanbad against the Contract for the sum of ----- [amount in Contract Currency] being the Contract Price; and
- (2) the Guarantor has agreed to guarantee the due performance of the Contract in the manner hereinafter appearing.

NOW, THEREFORE, the Guarantor hereby agrees with the Board as follows;

- (a) If the Contractor (unless relieved from the performance by any clause of the Contract or by statute or by the decision of a tribunal of competent jurisdiction) shall in any respect fail to execute the Contract

or commit any breach of his obligations there under then the Guarantor will indemnify and pay the Board the aggregate sum of ----- [amount of Guarantee shall be three ten (3)% (Percent) of the said value of the Contract]----- [in words], such sum being payable in the types and amount of currencies in which the Contract Price is payable, provided that the Board or his Authorized Representative has notified the Guarantor to that effect and has made a claim against the Guarantor before the expiry of O&M period.

- (b) The guarantor shall not be discharged or released from his guarantee by an arrangement between the Contractor and the Board, with or without the consent of the Guarantor, or by any alteration in the obligations undertaken by the Contractor, or by any forbearance on the part of the Contractor, whether as to payment, time, performance, or other wise, any notice to the Guarantor of any such arrangement, alteration, or forbearance is hereby expressly waived.

This guarantee shall be valid for one year after successful commissions of entire system from the date of expiry of O&M period as specified in the Contract.

Given under our hand on the date first mentioned above.

SIGNED BY -----
for and on behalf of the
Guarantor
(Seal of Guarantor)

in the presence of

(Witness)

FORM FOR CONTRACT AGREEMENT FOR SUPPLY AND OPERATION & MAINTENANCE OF CONTINUOUS AMBIENT AIR QUALITY MONITORING STATIONS (CAAQMS)

This operation and Maintenance Agreement ("Agreement") is made on this -
----- day of by and between:

Jharkhand State Pollution Control Board of Jharkhand State Pollution Control Board, HEC TA Division Building, PO- Dhurwa , Ranchi- 834 004 (Jharkhand), Jharkhand, India which term shall include permitted assigns and successors (Hereinafter called as "The Board" or "the Owner").

And

M/s. ----- a company incorporated -
----- with Regd. Office at -----
which term shall include permitted assigns and successors (hereinafter called as "Contractor" or "the Contractor")

RECITALS

Whereas the Owner had invited Bids under reference ----- for supply and Operation & Maintenance continuous ambient Air quality monitoring Station located at Dhanbad :

and M/s ----- had submitted their bid against the aforesaid invitation to bid and Owner has accepted the bid of M/s ----- and has decided to entrust the job of supply and Operation & Maintenance (O&M) of the one Air Monitoring Station located at Dhanbad to the Contractor vide Letter of Award ref.----- dated ----- at a total Contract Price for complete scope of work of ----- (Contract Price in Words and Figures) (Hereinafter "the Contract Price").

Whereas the Contractor has accepted the Letter of Award issued by the Owner in writing vide its letter no.----- dated ----- and has furnished Contract Performance Security for an amount of Rs. ----- [Rupees----- only] and which is initially valid up to ----- and Owner has accepted the said Contract Performance Security.

Whereas, Contractor is having expertise in the business inter alia, of supplying and operation & maintenance of Air Monitoring Stations and the owner has

engaged the Contractor to supply and perform operation and maintenance of said Air monitoring stations upon the terms & conditions set forth in this Agreement and the Letter of Award referred above issued by the Owner including all the documents referred in the above Letter of Award.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS;

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - 1) Scope of Works;
 - 2) Financial Bid;
 - 3) Technical Specifications;
 - 4) General Conditions of Contract;
 - 5) Special Conditions of Contract; and
 - 6) The Board's Notification of Award.

This Contract sets forth the entire contract and agreement between the parties pertaining to the supply of the Goods described herein and Operation & Maintenance of the Air Monitoring Stations and supersedes any and all earlier verbal or written agreements pertaining to the supply of the Goods.

This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

3. In consideration of the payments to be made by the Board to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Board to perform the Works and to remedy defects therein conformity in all respects with the provisions of the Contract.
4. The Board hereby covenants to pay the Contractor in consideration of the performance of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under

the provisions of the Contract at the times and in the manner prescribed by the Contract.

5. Any notice under the Contract shall be in the form of letter, telex, cable or facsimile. Notices to either party shall be given at such address or addresses as such party shall specify from time to time by written notice to the other. In the absence of such notice to the contrary, notice to the Board shall be properly addressed to:

Shri S K Sinha
Member-Secretary,
Jharkhand State Pollution Control Board,
HEC TA Division Building, PO-Dhurwa, Ranchi 834 004
(Jharkhand)

Fax No. 0651-2400850/138

And notice to the Contractor shall be properly addressed to :

[Contractor's address and electronic transmission address]

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signature of Board's Authorized
Representative

Signature of Contractor

Signed, Sealed and Delivered by the said

(For the Board) in the presence of

Signed, Sealed and Delivered by the said

(For the Contractor) in the presence of

Attachment 4

**PROFORMA OF CERTIFICATE FOR ISSUE BY THE JSPCB
AFTER SUCCESSFUL COMMISSIONING OF EQUIPMENT**

No.:

Date:

M/s

Subject: Certificate of Commissioning of equipment.

1. this is to certify that the equipment as detailed below has / have been received in good condition along with all the standard and special accessories (subject to remarks in Para No.2) and a set of spares in accordance with the Contract / specifications. The same have been installed and commissioned.

- a) Contract No..... dated
- b) Name of CAAQM station/ city
- c) Description of the equipment
- d) Package No.
- e) Quantity
- f) Bill of Lading dated
(for import contract)
- g) Name of the vessel/transporter
- h) RR No. dated
- i) Name of the consignee
- j) Date of commissioning and performance test

2. Details of recoveries to be made on that account:

Sl. No.	Description	Amount to the recovered

3. The proving/performance test has been done to out entire satisfaction and personnel have been trained to operate the equipment.

BOARD

CONTRACTOR

4. The contractor has fulfilled his contractual obligation satisfactorily. Explanatory notes for filling up the certificates:
- a) he has adhered to the time schedule specified in the contract in dispatching the documents drawing pursuant to Technical Specifications.
 - b) He has supervised the commissioning of the item in time i.e within the period specified in the contract from the date of intimation by the Purchaser in respect of the installation of the plant.
 - c) Training of personnel has been done by the contractor specified in the contract.
 - d) in the event of documents/drawings having not been contractor or installation and commissioning of the plant have been delayed on act of the contractor, the extent of delay should always be mentioned.

OR

The contractor has failed to fulfill his contractual obligations with regard to the following i.e. instruction or training etc.

- a)
- b)
- c)
- d)

5. The amount of recovery, on account of non-supply of accessories and spares is given under Para No. 2.
6. The amount of recovery on account of failure of the contractor to meet his contractual obligations is as indicated in endorsement of the letter.

Signature

Name

Designation with stamp.....