

BIDDING DOCUMENTS

Issued on: **22.10. 2011.**

for

Procurement of

Laboratory Equipment : A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES), B) X-Ray Fluorescence Spectrometer, C) Solid Waste Extraction Assembly, D) Bomb Calorimeter

ICB No: 009/G/WBPCB/WB-CBIPMP.

Project: Capacity Building and Industrial Pollution Management Project (CBIPMP).

PURCHASER:

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PART 1 – Bidding Procedures

Section I. Instructions to Bidders

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Section I. Instructions to Bidders

General

- Scope of Bid**
- 1.1 The Purchaser **indicated in the Bidding Data Sheet (BDS)**, issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section VI, Schedule of Requirements. The name and identification number of this International Competitive Bidding (ICB) procurement are **specified in the BDS**. The name, identification, and number of lots are **provided in the BDS**.
- 1.2 Throughout these Bidding Documents:
- (a) the term “in writing” means communicated in written form (e.g. by mail, e-mail, fax, telex) with proof of receipt;
 - (b) if the context so requires, “singular” means “plural” and vice versa; and
 - (c) “day” means calendar day.
- Source of Funds**
- 2.1 The Borrower or Recipient (hereinafter called “Borrower”) **specified in the BDS** has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) toward the cost of the project **named in the BDS**. The Borrower intends to apply a portion of the funds to eligible payments under the contract for which these Bidding Documents are issued.
- 2.2 Payments by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the financing agreement between the Borrower and the Bank (hereinafter called the Loan Agreement), and will be subject in all respects to the terms and conditions of that Loan Agreement. The Loan Agreement prohibits a withdrawal from the loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the funds.
- Fraud and Corruption**
- 3.1 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), as well as bidders, suppliers, and

contractors and their agents (whether declared or not), personnel, subcontractors, sub-consultants, service providers and suppliers under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts.¹ In pursuance of this policy, the Bank:

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
- (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party²;
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation³;
 - (iii) “collusive practice” is an arrangement between two or more parties⁴ designed to achieve an improper purpose, including to influence improperly the actions of another party;
 - (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party⁵;
 - (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

¹ In this context, any action taken by a bidder, supplier, contractor, or any of its personnel, agents, subcontractors, sub-consultants, service providers, suppliers and/or their employees to influence the procurement process or contract execution for undue advantage is improper.

² “Another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ “Party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

⁴ “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non-competitive levels.

⁵ “Party” refers to a participant in the procurement process or contract execution.

- (bb) acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under sub-clause 3.1 (e) below.
- (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;
- (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur; and
- (d) will sanction a firm or an individual, at any time, in accordance with prevailing Bank's sanctions procedures^a, including by publicly declaring such firm or individual ineligible, either indefinitely or for a stated period of time: (i) to be awarded a Bank-financed contract; and (ii) to be a nominated^b subcontractor, consultant, manufacturer or supplier, or service provider of an otherwise eligible firm being awarded a Bank-financed contract.
- (e) will have the right to require that, in contracts financed by a Bank loan, requiring consultants to permit the Bank to inspect their accounts and records and other documents relating to the submission of proposals and contract performance and to have them audited by auditors appointed by the Bank

3.2 In further pursuance of this policy, Bidders shall permit the Bank to inspect any accounts and records and other documents relating to the Bid submission and contract performance, and to have them audited by

^a A firm or an individual may be declared ineligible to be awarded a Bank-financed contract upon completion of the Bank's sanctions proceedings as per its sanctions procedures, including inter alia: (i) temporary suspension in connection with an ongoing sanctions proceeding; (ii) cross-debarment as agreed with other International Financial Institutions, including Multilateral Development Banks; and (iii) the World Bank Group corporate administrative procurement sanctions procedures for fraud and corruption.

^b A nominated sub-contractor, consultant, manufacturer or supplier, or service provider (different names are used depending on the particular bidding document) is one which either has been: (i) included by the bidder in its pre-qualification application or bid because it brings specific and critical experience and know-how that are accounted for in the evaluation of the bidder's pre-qualification application or the bid; or (ii) appointed by the Borrower.

auditors appointed by the Bank.

3.3 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 35.1 (a) (iii) of the General Conditions of Contract.

Eligible Bidders

4.1 A Bidder, and all parties constituting the Bidder, may have the nationality of any country, subject to the restrictions specified in Section V, Eligible Countries. A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract including Related Services.

4.2 A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they:

(a) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under these Bidding Documents ; or

(b) submit more than one bid in this bidding process, except for alternative offers permitted under ITB Clause 13. However, this does not limit the participation of subcontractors in more than one bid;

4.3-4.4 A firm that has been sanctioned by the Bank in accordance with the above ITB Clause 3.1 (d), or in accordance with the Bank's Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants, shall be ineligible to be awarded a Bank-financed contract, or benefit from a Bank-financed contract, financially or otherwise, during such period of time as the Bank shall determine. The list of debarred firms is available at the electronic address specified in the **BDS**.

4.5 Government-owned enterprises in the Borrower's Country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Purchaser.

- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.
- Eligible Goods and Related Services**
- 5.1 All the Goods and Related Services to be supplied under the Contract and financed by the Bank may have their origin in any country in accordance with Section V, Eligible Countries.
- 5.2 For purposes of this Clause, the term “goods” includes commodities, raw material, machinery, equipment, and industrial plants; and “related services” includes services such as insurance, installation, training, and initial maintenance.
- 5.3 The term “origin” means the country where the goods have been mined, grown, cultivated, produced, manufactured or processed; or, through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

Contents of Bidding Documents

- Sections of Bidding Documents**
- 6.1 The Bidding Documents consist of Parts 1, 2, and 3, which include all the Sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITB Clause 8.

PART 1 Bidding Procedures

- Section I. Instructions to Bidders (ITB)
- Section II. Bidding Data Sheet (BDS)
- Section III. Evaluation and Qualification Criteria
- Section IV. Bidding Forms
- Section V. Eligible Countries

PART 2 Supply Requirements

- Section VI. Schedule of Requirements

PART 3 Contract

- Section VII. General Conditions of Contract (GCC)
- Section VIII. Special Conditions of Contract (SCC)
- Section IX. Contract Forms

- 6.2 The Invitation for Bids issued by the Purchaser is not part of the Bidding Documents.
- 6.3 The Purchaser is not responsible for the completeness of the Bidding Documents and their addendum, if they were not obtained directly from the Purchaser.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.

**Clarification of
Bidding
Documents**

- 7.1 A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address **specified in the BDS**. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than twenty-one (21) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8 and ITB Sub-Clause 24.2.

**Amendment of
Bidding
Documents**

- 8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum.
- 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have obtained the Bidding Documents directly from the Purchaser.
- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 24.2

Preparation of Bids

Cost of Bidding

- 9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

Language of Bid

- 10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in the language **specified in the BDS**. Supporting documents and printed literature that are part of the Bid may be

in another language provided they are accompanied by an accurate translation of the relevant passages into the language **specified in the BDS**, in which case, for purposes of interpretation of the Bid, such translation shall govern.

- | | | |
|--|------|---|
| Documents | 11.1 | The Bid shall comprise the following: |
| Comprising the Bid | (a) | Bid Submission Form and the applicable Price Schedules, in accordance with ITB Clauses 12, 14, and 15; |
| | (b) | Bid Security or Bid-Securing Declaration, in accordance with ITB Clause 21, if required; |
| | (c) | written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB Clause 22; |
| | (d) | documentary evidence in accordance with ITB Clause 16 establishing the Bidder's eligibility to bid; |
| | (e) | documentary evidence in accordance with ITB Clause 17, that the Goods and Related Services to be supplied by the Bidder are of eligible origin; |
| | (f) | documentary evidence in accordance with ITB Clauses 18 and 30, that the Goods and Related Services conform to the Bidding Documents; |
| | (g) | documentary evidence in accordance with ITB Clause 19 establishing the Bidder's qualifications to perform the contract if its bid is accepted; and |
| | (h) | any other document required in the BDS . |
| Bid Submission Form and Price Schedules | 12.1 | The Bidder shall submit the Bid Submission Form using the form furnished in Section IV, Bidding Forms. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested. |
| | 12.2 | The Bidder shall submit the Price Schedules for Goods and Related Services, according to their origin as appropriate, using the forms furnished in Section IV, Bidding Forms |
| Alternative Bids | 13.1 | Unless otherwise specified in the BDS , alternative bids shall not be considered. |
| Bid Prices and Discounts | 14.1 | The prices and discounts quoted by the Bidder in the Bid Submission Form and in the Price Schedules shall conform to the requirements specified below. |

- 14.2 All lots and items must be listed and priced separately in the Price Schedules.
- 14.3 The price to be quoted in the Bid Submission Form shall be the total price of the bid, excluding any discounts offered.
- 14.4 The Bidder shall quote any unconditional discounts and indicate the method for their application in the Bid Submission Form.
- 14.5 The terms EXW, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by The International Chamber of Commerce, as specified in the **BDS**.
- 14.6 Prices shall be quoted as specified in each Price Schedule included in Section IV, Bidding Forms. The dis-aggregation of price components is required solely for the purpose of facilitating the comparison of bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered. In quoting prices, the Bidder shall be free to use transportation through carriers registered in any eligible country, in accordance with Section V Eligible Countries. Similarly, the Bidder may obtain insurance services from any eligible country in accordance with Section V Eligible Countries. Prices shall be entered in the following manner:
- (a) For Goods manufactured in the Purchaser's Country:
 - (i) the price of the Goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), 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 Goods;
 - (ii) any Purchaser's Country sales tax and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
 - (iii) the price for inland transportation, insurance, and other local services required to convey the Goods to their final destination (Project Site) specified in the **BDS**.
 - (b) For Goods manufactured outside the Purchaser's Country, to be imported:
 - (i) the price of the Goods, quoted CIP named place of destination, in the Purchaser's Country, or CIF named port of destination, as specified in the **BDS**;

- (ii) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) specified in the **BDS**;
 - (iii) in addition to the CIP prices specified in (b)(i) above, the price of the Goods to be imported may be quoted FCA (named place of destination) or CPT (named place of destination), if so specified in the **BDS**;
- (c) For Goods manufactured outside the Purchaser's Country, already imported:

[For previously imported Goods, the quoted price shall be distinguishable from the original import value of these Goods declared to customs and shall include any rebate or mark-up of the local agent or representative and all local costs except import duties and taxes, which have been and/or have to be paid by the Purchaser. For clarity the bidders are asked to quote the price including import duties, and additionally to provide the import duties and the price net of import duties which is the difference of those values.]

- (i) the price of the Goods, including the original import value of the Goods; plus any mark-up (or rebate); plus any other related local cost, and custom duties and other import taxes already paid or to be paid on the Goods already imported.
 - (ii) the custom duties and other import taxes already paid (need to be supported with documentary evidence) or to be paid on the Goods already imported;
 - (iii) the price of the Goods, obtained as the difference between (i) and (ii) above;
 - (iv) any Purchaser's Country sales and other taxes which will be payable on the Goods if the contract is awarded to the Bidder; and
 - (v) the price for inland transportation, insurance, and other local services required to convey the Goods from the named place of destination to their final destination (Project Site) specified in the **BDS**.
- (d) for Related Services, other than inland transportation and other services required to convey the Goods to their

final destination, whenever such Related Services are specified in the Schedule of Requirements:

- (i) the price of each item comprising the Related Services (inclusive of any applicable taxes).

14.7 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified in the **BDS**. A Bid submitted with an adjustable price quotation shall be treated as non responsive and shall be rejected, pursuant to ITB Clause 30. However, if in accordance with the **BDS**, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, a bid submitted with a fixed price quotation shall not be rejected, but the price adjustment shall be treated as zero.

14.8 If so indicated in ITB Sub-Clause 1.1, bids are being invited for individual contracts (lots) or for any combination of contracts (packages). Unless otherwise indicated in the **BDS**, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price reduction (discount) for the award of more than one Contract shall specify the applicable price reduction in accordance with ITB Sub-Clause 14.4 provided the bids for all lots are submitted and opened at the same time.

Currencies of Bid

15.1 The Bidder shall quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in the currency of the Purchaser's country, unless otherwise specified in the **BDS**.

15.2 The Bidder may express the bid price in the currency of any country in accordance with Section V, Eligible countries. If the Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three currencies in addition to the currency of the Purchaser's Country.

Documents Establishing the Eligibility of the Bidder

16.1 To establish their eligibility in accordance with ITB Clause 4, Bidders shall complete the Bid Submission Form, included in Section IV, Bidding Forms.

- Documents**
Establishing the Eligibility of the Goods and Related Services
- 17.1 To establish the eligibility of the Goods and Related Services in accordance with ITB Clause 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms, included in Section IV, Bidding Forms.
- Documents**
Establishing the Conformity of the Goods and Related Services
- 18.1 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section VI, Schedule of Requirements.
- 18.2 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if applicable, a statement of deviations and exceptions to the provisions of the Schedule of Requirements.
- 18.3 The Bidder shall also furnish a list giving full particulars, including available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period **specified in the BDS** following commencement of the use of the goods by the Purchaser.
- 18.4 Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in the Schedule of Requirements, are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers, provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in the Schedule of Requirements.
- Documents**
Establishing the Qualifications of the Bidder
- 19.1 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction:
- (a) that, if **required in the BDS**, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of

the Goods to supply these Goods in the Purchaser's Country;

- (b) that, if **required in the BDS**, in case of a Bidder not doing business within the Purchaser's Country, the Bidder is or will be (if awarded the contract) represented by an Agent in the country equipped and able to carry out the Supplier's maintenance, repair and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and
- (c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.

**Period of Validity
of Bids**

- 20.1 Bids shall remain valid for the period **specified in the BDS** after the bid submission deadline date prescribed by the Purchaser. A bid valid for a shorter period shall be rejected by the Purchaser as non responsive.
- 20.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 21, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid, except as provided in ITB Sub-Clause 20.3.
- 20.3 In the case of fixed price contracts, if the award is delayed by a period exceeding fifty-six (56) days beyond the expiry of the initial bid validity, the Contract price shall be adjusted as specified in the request for extension. Bid evaluation shall be based on the Bid Price without taking into consideration the above correction.

Bid Security

- 21.1 The Bidder shall furnish as part of its bid, a Bid Security or a Bid-Securing Declaration, if required, as **specified in the BDS**.
- 21.2 The Bid Security shall be in the amount specified in the BDS and denominated in the currency of the Purchaser's Country or a freely convertible currency, and shall:
 - (a) at the bidder's option, be in the form of either a letter of credit, or a bank guarantee from a banking institution, or a bond issued by a surety;
 - (b) be issued by a reputable institution selected by the bidder

and located in any eligible country. If the institution issuing the bond is located outside the Purchaser's Country, it shall have a correspondent financial institution located in the Purchaser's Country to make it enforceable.

- (c) be substantially in accordance with one of the forms of Bid Security included in Section IV, Bidding Forms, or other form approved by the Purchaser prior to bid submission;
 - (d) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 21.5 are invoked;
 - (e) be submitted in its original form; copies will not be accepted;
 - (f) remain valid for a period of 28 days beyond the validity period of the bids, as extended, if applicable, in accordance with ITB Clause 20.2;
- 21.3 If a Bid Security or a Bid- Securing Declaration is required in accordance with ITB Sub-Clause 21.1, any bid not accompanied by a substantially responsive Bid Security or Bid Securing Declaration in accordance with ITB Sub-Clause 21.1, shall be rejected by the Purchaser as non-responsive.
- 21.4 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to ITB Clause 44.
- 21.5 The Bid Security may be forfeited or the Bid Securing Declaration executed:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, except as provided in ITB Sub-Clause 20.2; or
 - (b) if the successful Bidder fails to:
 - (i) sign the Contract in accordance with ITB Clause 43;
 - (ii) furnish a Performance Security in accordance with ITB Clause 44.
- 21.6 The Bid Security or Bid- Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security or Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent mentioned in Section IV

“Bidding Forms,” Bidder Information Form Item 7.

- 21.7 If a bid security is **not required in the BDS**, and
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in ITB 20.2, or
 - (b) if the successful Bidder fails to: sign the Contract in accordance with ITB 43; or furnish a performance security in accordance with ITB 44;

the Borrower may, **if provided for in the BDS**, declare the Bidder disqualified to be awarded a contract by the Purchaser for a period of time **as stated in the BDS**.

**Format and
Signing of Bid**

- 22.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB Clause 11 and clearly mark it “ORIGINAL.” In addition, the Bidder shall submit copies of the bid, in the number specified in the **BDS** and clearly mark them “COPY.” In the event of any discrepancy between the original and the copies, the original shall prevail.
- 22.2 The original and all copies of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder.
- 22.3 Any interlineation, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Bid.

Submission and Opening of Bids

**Submission,
Sealing and
Marking of
Bids**

- 23.1 Bidders may always submit their bids by mail or by hand. When so specified in the **BDS**, bidders shall have the option of submitting their bids electronically.
- (a) Bidders submitting bids by mail or by hand, shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB Clause 13, in separate sealed envelopes, duly marking the envelopes as “ORIGINAL” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB sub-Clauses 23.2 and 23.3.
 - (b) Bidders submitting bids electronically shall follow the electronic bid submission procedures specified in the **BDS**.
- 23.2 The inner and outer envelopes shall:

- (a) Bear the name and address of the Bidder;
 - (b) be addressed to the Purchaser in accordance with ITB Sub-Clause 24.1;
 - (c) bear the specific identification of this bidding process indicated in ITB 1.1 and any additional identification marks as **specified in the BDS**; and
 - (d) bear a warning not to open before the time and date for bid opening, in accordance with ITB Sub-Clause 27.1.
- 23.3 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the bid.
- Deadline for Submission of Bids**
- 24.1 Bids must be received by the Purchaser at the address and no later than the date and time **specified in the BDS**.
- 24.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- Late Bids**
- 25.1 The Purchaser shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB Clause 24. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
- Withdrawal, Substitution, and Modification of Bids**
- 26.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice in accordance with ITB Clause 23, duly signed by an authorized representative, and shall include a copy of the authorization (the power of attorney) in accordance with ITB Sub-Clause 22.2, (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be:
- (a) submitted in accordance with ITB Clauses 22 and 23 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked “WITHDRAWAL,” “SUBSTITUTION,” or “MODIFICATION;” and
 - (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 24.

- 26.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 26.1 shall be returned unopened to the Bidders.
- 26.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.

Bid Opening

- 27.1 The Purchaser shall conduct the bid opening in public at the address, date and time **specified in the BDS**. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB Sub-Clause 23.1, shall be as **specified in the BDS**.
- 27.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid shall not be opened, but returned to the Bidder. If the withdrawal envelope does not contain a copy of the "power of attorney" confirming the signature as a person duly authorized to sign on behalf of the Bidder, the corresponding bid will be opened. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Next, envelopes marked "SUBSTITUTION" shall be opened and read out and exchanged with the corresponding Bid being substituted, and the substituted Bid shall not be opened, but returned to the Bidder. No Bid substitution shall be permitted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further.
- 27.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Prices, including any discounts and alternative offers; the presence of a Bid Security or Bid-Securing Declaration, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative offers read out at Bid opening shall be considered for evaluation. No Bid shall be rejected at Bid opening except for late bids, in accordance with ITB Sub-Clause 25.1.
- 27.4 The Purchaser shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether

there is a withdrawal, substitution, or modification; the Bid Price, per lot if applicable, including any discounts, and alternative offers if they were permitted; and the presence or absence of a Bid Security or Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the attendance sheet. A copy of the record shall be distributed to all Bidders who submitted bids in time, and posted online when electronic bidding is permitted.

Evaluation and Comparison of Bids

Confidentiality

- 28.1 Information relating to the examination, evaluation, comparison, and post qualification of bids, and recommendation of contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award.
- 28.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the bids or contract award decisions may result in the rejection of its Bid.
- 28.3 Notwithstanding ITB Sub-Clause 28.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.

Clarification of Bids

- 29.1 To assist in the examination, evaluation, comparison and post-qualification of the bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 31.

Responsiveness of Bids

- 30.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself.
- 30.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviation, reservation, or omission. A material

deviation, reservation, or omission is one that:

- (a) affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or
- (b) limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or
- (c) if rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

30.3 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.

**Nonconformities,
Errors, and
Omissions**

31.1 Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation.

31.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

31.3 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis:

- (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;
- (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.

- 31.4 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be rejected.
- Preliminary Examination of Bids**
- 32.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted.
- 32.2 The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the offer shall be rejected.
- (a) Bid Submission Form, in accordance with ITB Sub-Clause 12.1;
 - (b) Price Schedules, in accordance with ITB Sub-Clause 12.2;
 - (c) Bid Security or Bid Securing Declaration, in accordance with ITB Clause 21, if applicable.
- Examination of Terms and Conditions; Technical Evaluation**
- 33.1 The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the GCC and the SCC have been accepted by the Bidder without any material deviation or reservation.
- 33.2 The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 18, to confirm that all requirements specified in Section VI, Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation.
- 33.3 If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 30, it shall reject the Bid.
- Conversion to Single Currency**
- 34.1 For evaluation and comparison purposes, the Purchaser shall convert all bid prices expressed in amounts in various currencies into an amount in a single currency **specified in the BDS**, using the selling exchange rates established by the source and on the date **specified in the BDS**.
- Domestic Preference**
- 35.1 Domestic preference shall not be a factor in bid evaluation, unless otherwise **specified in the BDS**.
- Evaluation of Bids**
- 36.1 The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive.
- 36.2 To evaluate a Bid, the Purchaser shall only use all the factors,

methodologies and criteria defined in ITB Clause 36. No other criteria or methodology shall be permitted.

- 36.3 To evaluate a Bid, the Purchaser shall consider the following:
- (a) evaluation will be done for Items or Lots, as **specified in the BDS**; and the Bid Price as quoted in accordance with clause 14;
 - (b) price adjustment for correction of arithmetic errors in accordance with ITB Sub-Clause 31.3;
 - (c) price adjustment due to discounts offered in accordance with ITB Sub-Clause 14.4;
 - (d) adjustments due to the application of the evaluation criteria **specified in the BDS** from amongst those set out in Section III, Evaluation and Qualification Criteria;
 - (e) adjustments due to the application of a margin of preference, in accordance with ITB Clause 35 if applicable.
- 36.4 The Purchaser's evaluation of a bid will exclude and not take into account:
- (a) In the case of Goods manufactured in the Purchaser's Country, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;
 - (b) in the case of Goods manufactured outside the Purchaser's Country, already imported or to be imported, customs duties and other import taxes levied on the imported Good, sales and other similar taxes, which will be payable on the Goods if the contract is awarded to the Bidder;
 - (c) any allowance for price adjustment during the period of execution of the contract, if provided in the bid.
- 36.5 The Purchaser's evaluation of a bid may require the consideration of other factors, in addition to the Bid Price quoted in accordance with ITB Clause 14. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids, unless otherwise specified in Section III, Evaluation and Qualification Criteria. The factors, methodologies and criteria to be used shall be as specified in ITB 36.3 (d).
- 36.6 If so **specified in the BDS**, these Bidding Documents shall allow

Bidders to quote separate prices for one or more lots, and shall allow the Purchaser to award one or multiple lots to more than one Bidder. The methodology of evaluation to determine the lowest-evaluated lot combinations, is specified in Section III, Evaluation and Qualification Criteria.

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| Comparison of Bids | 37.1 The Purchaser shall compare all substantially responsive bids to determine the lowest-evaluated bid, in accordance with ITB Clause 36. |
| Post qualification of the Bidder | 38.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid is qualified to perform the Contract satisfactorily. |
| | 38.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 19. |
| | 38.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily. |
| Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids | 39.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. |

Award of Contract

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| Award Criteria | 40.1 The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily. |
| Purchaser's Right to Vary Quantities at Time of Award | 41.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section VI, Schedule of Requirements, provided this does not exceed the percentages specified in the BDS , and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents. |
| Notification of | 42.1 Prior to the expiration of the period of bid validity, the Purchaser |

Award

shall notify the successful Bidder, in writing, that its Bid has been accepted.

42.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

42.3 The Purchaser shall publish in UNDB online and in the dgMarket the results identifying the bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of bidders whose bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful bidders may request in writing to the Purchaser for a debriefing seeking explanations on the grounds on which their bids were not selected. The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after Publication of contract award, requests a debriefing.

42.4 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 44, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 21.4.

Signing of Contract

43.1 Promptly after notification, the Purchaser shall send the successful Bidder the Agreement and the Special Conditions of Contract.

43.2 Within twenty-eight (28) days of receipt of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.

43.3 Notwithstanding ITB 43.2 above, in case signing of the Contract Agreement is prevented by any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, where such export restrictions arise from trade regulations from a country supplying those products/goods, systems or services, the Bidder shall not be bound by its bid, always provided, always provided, however, that the Bidder can demonstrate to the satisfaction of the Purchaser and of the Bank that signing of the Contract Agreement has not been prevented by any lack of diligence on the part of the Bidder in completing any formalities, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract.

Performance Security

44.1 Within twenty eight (28) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required,

shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section IX Contract forms, or another Form acceptable to the Purchaser. The Purchaser shall promptly notify the name of the winning Bidder to each unsuccessful Bidder and discharge the Bid Securities of the unsuccessful bidders pursuant to ITB Sub-Clause 21.4.

- 44.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security or execution of the Bid-Securing Declaration. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

Section II. Bidding Data Sheet (BDS)

The following specific data for the goods to be procured shall complement, supplement, or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

ITB Clause Reference	A. General
ITB 1.1	<p>The Purchaser is: West Bengal Pollution Control Board, "Paribesh Bhavan" 10A, Block-LA, Sector-III, Bidhannagar, Kolkata-700098, Ph. 91-33-23351623, Fax-91-33-23352813, Email: ms@wbpcb.gov.in Website: http://www.wbpcb.gov.in</p>
ITB 1.1	<p>The name and identification number of the ICB are: Supply and installation Laboratory Equipments:</p> <p><i>A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES), B) X-Ray Fluorescence Spectrometer, C) Solid Waste Extraction Assembly, D) Bomb Calorimeter</i></p> <p>The number, identification and names of the lots comprising this ICB are: ICB No: 009/G/WBPCB/WB-CBIPMP.</p>
ITB 2.1	The Borrower is: Government of India, MoEF
ITB 2.1	The name of the Project is: Capacity Building and Industrial Pollution Management Project (CBIPMP).
ITB 4.3-4.4	A list of debarred firms is available at http://www.worldbank.org/debar
B. Contents of Bidding Documents	
ITB 7.1	<p>For Clarification of bid purposes only, the Purchaser's address is:</p> <p>Attention: <i>Dr. Ujjal Mukhopadhyay, Chief Scientist</i> Address: West Bengal Pollution Control Board, <i>"Paribesh Bhavan" 10A, Block-LA, Sector-III, Bidhannagar</i></p> <p>City: <i>Kolkata</i> Pin Code: <i>700098,</i> Country: <i>India</i></p>

	<p>Telephone: +91-33-23351623 Facsimile number: +91-33-23352813 Electronic mail address: ujjal@wbpcb.gov.in</p> <p>However Pre-Bid Conference shall take place at the office of West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA, Sector-III, Bidhannagar, Kolkta-700098, Ph. 91-33-23351623, Fax-91-33-23352813, Email: ms@wbpcb.gov.in on 12.11.2011 at 10.00 hrs for all items</p>
	C. Preparation of Bids
ITB 10.1	The language of the bid is: <i>English</i>
ITB 11.1 (h)	<p>The Bidder shall submit the following additional documents in its bid:</p> <p>(a) THE LEGAL STATUS, PLACE OF REGISTRATION, AND PRINCIPAL PLACE OF BUSINESS OF THE COMPANY OR FIRM (BIDDER AND /OR MANUFACTURER);</p> <p>(b) CERTIFICATE/ASSURANCE FROM THE BIDDER AND/OR MANUFACTURER FOR OWNING THE RESPONSIBILITY FOR FAULT-FREE OPERATIONS AND MAINTENANCE DURING THE WARRANTY PERIOD OF EQUIPMENTS;</p> <p>(c) AN ITEM –BY-ITEM COMMENTARY ON THE PURCHASER’S TECHNICAL SPECIFICATIONS DEMONSTRATING SUBSTANTIAL RESPONSIVENESS OF THE GOODS AND SERVICES;</p>
ITB 13.1	Alternative Bids <i>shall not be considered.</i>
ITB 14.5	The Incoterms edition is: <i>Incoterms 2000</i>
ITB 14.6 (b) (i) and (c) (iii)	Place of Destination: CIP, Kolkata
ITB 14.6 (a) (iii);(b)(ii) and (c)(v)	“Final destination (Project Site)”: West Bengal Pollution Control Board . Address: ,”Paribesh Bhavan” 10A, Block-LA, Sector-III, Bidhannagar, Kolkta-700098,West Bengal, India
ITB 14.6 (b) (iii)	In addition to the CIP price specified in ITB 14.6 (b)(i), the price of the Goods manufactured outside the Purchaser’s Country shall be quoted: CIF, Kolkata
ITB 14.7	The prices quoted by the Bidder <i>shall not</i> be adjustable.
ITB 14.8	<p>Prices quoted for each lot shall correspond at least to 100 % of the items specified for each lot.</p> <p>Prices quoted for each item of a lot shall correspond at least to 100% percent of the</p>

	quantities specified for this item of a lot.
ITB 15.1	The Bidder <i>is</i> required to quote in the currency of the Purchaser's Country the portion of the bid price that corresponds to expenditures incurred in that currency.
ITB 18.3	Period of time the Goods are expected to be functioning (for the purpose of spare parts): Ten (10) years including two (2) years of warranty. Bidder will give an undertaking from the original manufacturer assuring supply of spares & consumables for eight (8) more years after expiry of warranty period of two years. This prices shall not be considered for the evaluation purpose for procurement of equipments
ITB 19.1 (a)	Manufacturer's authorization <i>is required as per Proforma in Section IV</i>
ITB 19.1 (b)	After sales service <i>is required. The authorized service centre should be available in India.</i>
ITB 20.1	The bid validity period shall be 120 (one hundred twenty) days from the date of opening of bids.
ITB 21.1	Bid shall include a Bid Security in the form of Bank Guarantee, Demand Draft or Banker's cheque issued by a scheduled Bank operating in India in favour of "The Member Secretary, West Bengal Pollution Control Board". The Bank Guarantee issued by a foreign bank must be confirmed by a scheduled commercial Indian bank or a foreign bank operating in India, approved by RBI, and acceptable to the purchaser. Format of Bid Security if submitted in the form of Bank Guarantee is enclosed in "Section VI Bidding Forms"
ITB 21.2	The amount of the Bid Security shall be as (in INR / US\$) A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES) = Rs.1,20,000/- (US\$ 2400) B) X-ray Fluorescence Spectrometer and related spares & consumables = Rs 3,00,000/- (US\$ 6000) C) Solid Waste Extraction Assembly and related spares & consumables = Rs. 1,50,000/- (US\$ 3000) D) Bomb Calorimeter and related spares & consumables , =Rs. 30,000/- (US\$ 600)
ITB 21.7	If the Bidder incurs any of the actions prescribed in subparagraphs (a) or (b) of this provision, the Borrower will declare the Bidder ineligible to be awarded contracts by the Purchaser for a period of ----- : Not Applicable
ITB 22.1	In addition to the original of the bid, the number of copies is: 3(three)

D. Submission and Opening of Bids	
ITB 23.1	Bidders <i>shall not</i> have the option of submitting their bids electronically.
ITB 23.1 (b)	If bidders shall have the option of submitting their bids electronically, the electronic bidding submission procedures shall be: <i>Not Applicable</i>
ITB 23.2 (c)	The inner and outer envelopes shall bear the following additional identification marks: Sealed bid for supply of Laboratory Instruments against ICB No: 009/G/WBPCB/WB-CBIPMP. <i>(Do not open before 2.30 hrs. on 07.12.2011)</i>
ITB 24.1	<p>For bid submission purposes, the Purchaser's address is:</p> <p>Attention: Project Director & Member Secretary Address: : West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III, Bidhannagar, City: Kolkata Pin Code: 700098 Country: India Telephone: + 91-33-23351623 Facsimile number: + 91-33-23352813</p> <p>The deadline for the submission of bids is: Date: 07.12.2011 Time: 2.00 p.m.</p> <p>In the event of the specified date for the submission of bids, being declared a holiday for the Purchaser, the bids will be received up to the appointed time on the next working day</p>
ITB 27.1	<p>The bid opening shall take place at:</p> <p>Place: Training Room (ist floor) Address: : West Bengal Pollution Control Board, "Paribesh Bhavan" 10A,Block-LA,Sector-III, Bidhannagar, City: Kolkata Pin : 700098 Date: 07.12.2011 Time: 2.30 p.m</p> <p>In the event of the specified dater of the bid opening being declared a holiday for the Purchaser, the bids shall be opened at the appointed time and location on the next working day</p>
ITB 27.1	If electronic bid submission is permitted in accordance with ITB sub-clause 23.1, the specific bid opening procedures shall be: Not Applicable

E. Evaluation and Comparison of Bids	
ITB 34.1	<p>Bid prices expressed in different currencies shall be converted in: INR(Indian <i>Rupees</i>)</p> <p>The source of exchange rate shall be <i>BC selling exchange rate established by State Bank of India</i></p> <p>The date for the exchange rate shall be the date of Bid opening</p>
ITB 35.1	<p>Domestic preference <i>shall</i> be a bid evaluation factor.</p> <p><i>The methodology for calculating the margin of preference and the criteria for its application shall be as specified in Section III, Evaluation and Qualification Criteria.</i></p>
ITB 36.3(a)	<p>Evaluation will be done separately for each of the following equipments:</p> <p><i>A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES), B) X-Ray Fluorescence Spectrometer, C)Solid Waste Extraction Assembly, D) Bomb Calorimeter</i></p> <p>Note: <i>Bids will be evaluated itemwise and the Contract will comprise the item(s) awarded to the successful Bidder.</i></p>
ITB 36.3(d)	<p>The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria:</p> <p>a. Deviation in Delivery schedule: No.</p> <p>b. Deviation in payment schedule: No</p> <p>c. The cost of major replacement components, mandatory spare parts, and service: No</p> <p>d. The availability in the Purchaser’s Country of spare parts and after-sales services for the equipment offered in the bid: No</p> <p>e. The projected operating and maintenance costs during the life of the equipment: No.</p> <p>f. Annual Maintenance cost: 3 years after warranty: Yes</p>
ITB 36.6	<p>Bidders be allowed to quote separate prices for one or more lots.</p>
F. Award of Contract	

ITB 41.1	The maximum percentage by which quantities may be increased is: 15% The maximum percentage by which quantities may be decreased is: 15%
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Section III. Evaluation and Qualification Criteria

This Section complements the Instructions to Bidders. It contains the criteria that the Purchaser may use to evaluate a bid and determine whether a Bidder has the required qualifications. No other criteria shall be used.

Contents

1. Domestic Preference (ITB 35.1)
2. Evaluation Criteria (ITB 36.3 (d))
3. Multiple Contracts (ITB 36.6)
4. Post qualification Requirements (ITB 38.2)

1. Domestic Preference (ITB 35.1)

If the Bidding Data Sheet so specifies, the Purchaser will grant a margin of preference to goods manufactured in the Purchaser's country for the purpose of bid comparison, in accordance with the procedures outlined in subsequent paragraphs.

Bids will be classified in one of three groups, as follows:

- (a) **Group A:** Bids offering goods manufactured in the Purchaser's Country, for which (i) labor, raw materials, and components from within the Purchaser's Country account for more than thirty (30) percent of the EXW price; and (ii) the production facility in which they will be manufactured or assembled has been engaged in manufacturing or assembling such goods at least since the date of bid submission.
- (b) **Group B:** All other bids offering Goods manufactured in the Purchaser's Country.
- (c) **Group C:** Bids offering Goods manufactured outside the Purchaser's Country that have been already imported or that will be imported.

To facilitate this classification by the Purchaser, the Bidder shall complete whichever version of the Price Schedule furnished in the Bidding Documents is appropriate provided, however, that the completion of an incorrect version of the Price Schedule by the Bidder shall not result in rejection of its bid, but merely in the Purchaser's reclassification of the bid into its appropriate bid group.

The Purchaser will first review the bids to confirm the appropriateness of, and to modify as necessary, the bid group classification to which bidders assigned their bids in preparing their Bid Forms and Price Schedules.

All evaluated bids in each group will then be compared to determine the lowest evaluated bid of each group. Such lowest evaluated bids shall be compared with each other and if as a result of this comparison a bid from Group A or Group B is the lowest, it shall be selected for the award.

If, as a result of the preceding comparison, the lowest evaluated bid is from Group C, the lowest evaluated bid from Group C bids will then be further compared with the lowest evaluated bid from Group A, after adding to the evaluated bid price of goods offered in the bid for Group C, for the purpose of further comparison only an amount equal to fifteen (15) percent of the CIP (named place of destination) bid price. The lowest-evaluated bid determined from this last comparison shall be selected for the award."

2. Evaluation Criteria (ITB 36.3 (d))

The Purchaser's evaluation of a bid may take into account, in addition to the Bid Price quoted in accordance with ITB Clause 14.6, one or more of the following factors as specified in ITB Sub-Clause 36.3(d) and in BDS referring to ITB 36.3(d), using the following criteria and methodologies.

- (a) Delivery schedule. (as per Incoterms specified in the BDS)

The Goods specified in the List of Goods are required to be delivered within the acceptable time range (after the earliest and before the final date, both dates inclusive) specified in Section VI, Delivery Schedule. No credit will be given to deliveries before the earliest date, and bids offering delivery after the final date shall be treated as non responsive. Within this acceptable period, an adjustment, as specified in BDS Sub-Clause 36.3(d), will be added, for evaluation purposes only, to the bid price of bids offering deliveries later than the “Earliest Delivery Date” specified in Section VI , Delivery Schedule.

- (b) Deviation in payment schedule.

Not Applicable

- (c) Cost of major replacement components, mandatory spare parts, and service.

Not Applicable

- (d) Availability in the Purchaser’s Country of spare parts and after sales services for equipment offered in the bid.

Not Applicable

- (e) Projected operating and maintenance costs.

Not Applicable

- (f) Performance and productivity of the equipment.

Not Applicable

- (f) Annual Maintenance Cost

Yes (3 years after warranty)

Evaluation of bids will be done item wise.

3. Multiple Contracts (ITB 36.6)

The Purchaser shall award multiple contracts to the Bidder that offers the lowest evaluated combination of bids (one contract per bid) and meets the post-qualification criteria (this Section III, Sub-Section ITB 38.2 Post-Qualification Requirements)

The Purchaser shall shall take into account:

- (i) the lowest-evaluated bid for each lot and

- (ii) the price reduction per lot and the methodology for its application as offered by the Bidder in its bid”

4. Postqualification Requirements (ITB 38.2)

After determining the lowest-evaluated bid in accordance with ITB Sub-Clause 37.1, the Purchaser shall carry out the post qualification of the Bidder in accordance with ITB Clause 38, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder’s qualifications.

1. *The bidder should be a manufacturer who must have manufactured, tested and supplied the equipment(s) similar to the type specified in the ‘schedule of requirements’ up to at least 100% of the quantity required in any one of the last 3 years. The equipment for supply must be of the most recent series models incorporating the latest improvements in design.*
 2. *At least 2 equipment should be in satisfactory operation for the last 12 months as on date of bid opening. Further, bidder should be in continuous business of manufacturing products similar to that specified in the schedule of requirements during the last three years prior to bid opening.*
- (b) *Bids of bidders quoting as authorized representative of original manufacturer, meeting with the above requirement in full, can also be considered provided:*
- (i) *The manufacturer furnishes a legally enforceable authorization in the prescribed format assuring full guarantee and warranty obligations as per GCC and SCC for the goods offered; and*
 - (ii) *The bidder, as authorized representative, has supplied, installed, commissioned and provided after sales satisfactorily at least 100% of the quantity similar to the type specified in the Schedule of Requirements in any one of the last three years which must be in satisfactory operation for at least 6 months on the date of bid opening and must be providing annual maintenance services for the above equipment installation in about three centers in the country for over one year.*
2. *The bidder should furnish the information on all past supplies and satisfactory performance form the user with full contact details including phone, fax and e.mail.*
 3. *All bids submitted shall also include the following information along with specified formats:*
 - (i) *Copies of original documents defining the constitution or legal status, place of registration and principle place of business of the company or firm or partnership, etc.*

- (ii) The bidder should furnish a brief write-up, backed with adequate data, explaining his available capacity and experience (both technical and commercial) for the manufacture and supply of the required systems and equipment within the specified time of completion after meeting all their current commitments.*
- (iii) The bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the Purchaser or his representative for inspection.*
- (iv) Details of Service Centers and information on service support facilities that would be provided after the warranty period.*
- (v) Reports on financial standing of the bidder such as profit and loss statements, balance sheets and auditor's report for the past three years, banker's certificates, etc.*

Section IV. Bidding Forms

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Bidder Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*
ICB No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name <i>[insert Bidder's legal name]</i>
2. In case of JV, legal name of each party: <i>[insert legal name of each party in JV]</i>
3. Bidder's actual or intended Country of Registration: <i>[insert actual or intended Country of Registration]</i>
4. Bidder's Year of Registration: <i>[insert Bidder's year of registration]</i>
5. Bidder's Legal Address in Country of Registration: <i>[insert Bidder's legal address in country of registration]</i>
6. Bidder's Authorized Representative Information Name: <i>[insert Authorized Representative's name]</i> Address: <i>[insert Authorized Representative's Address]</i> Telephone/Fax numbers: <i>[insert Authorized Representative's telephone/fax numbers]</i> Email Address: <i>[insert Authorized Representative's email address]</i>
7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i> Articles of Incorporation or Registration of firm named in 1, above, in accordance with ITB Sub-Clauses 4.1 and 4.2. In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB Sub-Clause 4.1. In case of government owned entity from the Purchaser's country, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB Sub-Clause 4.5.

Joint Venture Partner Information Form

[The Bidder shall fill in this Form in accordance with the instructions indicated below].

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Page _____ of _____ pages

1. Bidder's Legal Name: <i>[insert Bidder's legal name]</i>
2. JV's Party legal name: <i>[insert JV's Party legal name]</i>
3. JV's Party Country of Registration: <i>[insert JV's Party country of registration]</i>
4. JV's Party Year of Registration: <i>[insert JV's Party year of registration]</i>
5. JV's Party Legal Address in Country of Registration: <i>[insert JV's Party legal address in country of registration]</i>
<p>6. JV's Party Authorized Representative Information</p> <p>Name: <i>[insert name of JV's Party authorized representative]</i></p> <p>Address: <i>[insert address of JV's Party authorized representative]</i></p> <p>Telephone/Fax numbers: <i>[insert telephone/fax numbers of JV's Party authorized representative]</i></p> <p>Email Address: <i>[insert email address of JV's Party authorized representative]</i></p>
<p>7. Attached are copies of original documents of: <i>[check the box(es) of the attached original documents]</i></p> <p>Articles of Incorporation or Registration of firm named in 2, above, in accordance with ITB Sub-Clauses 4.1 and 4.2.</p> <p>In case of government owned entity from the Purchaser's country, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITB Sub-Clause 4.5.</p>

Bid Submission Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Invitation for Bid No.: *[insert No of IFB]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: _____ *[insert the number and issuing date of each Addenda];*
- (b) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services _____ *[insert a brief description of the Goods and Related Services];*
- (c) The total price of our Bid, excluding any discounts offered in item (d) below, is: _____ *[insert the total bid price in words and figures, indicating the various amounts and the respective currencies];*
- (d) The discounts offered and the methodology for their application are:

Discounts. If our bid is accepted, the following discounts shall apply. _____ *[Specify in detail each discount offered and the specific item of the Schedule of Requirements to which it applies.]*

Methodology of Application of the Discounts. The discounts shall be applied using the following method: _____ *[Specify in detail the method that shall be used to apply the discounts];*

- (e) Our bid shall be valid for the period of time specified in ITB Sub-Clause 20.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 24.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 44 and GCC Clause 18 for the due performance of the Contract;
- (g) We, including any subcontractors or suppliers for any part of the contract, have nationality from eligible countries _____ *[insert the nationality of the Bidder,*

including that of all parties that comprise the Bidder, if the Bidder is a JV, and the nationality each subcontractor and supplier]

- (h) We have no conflict of interest in accordance with ITB Sub-Clause 4.2;
- (i) Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract—has not been declared ineligible by the Bank, under the Purchaser’s country laws or official regulations, in accordance with ITB Sub-Clause 4.3;
- (j) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract: *[insert complete name of each Recipient, its full address, the reason for which each commission or gratuity was paid and the amount and currency of each such commission or gratuity]*

Name of Recipient	Address	Reason	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

(If none has been paid or is to be paid, indicate “none.”)

- (k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed: _____ *[insert signature of person whose name and capacity are shown]*
 In the capacity of _____ *[insert legal capacity of person signing the Bid Submission Form]*

Name: _____ *[insert complete name of person signing the Bid Submission Form]*

Duly authorized to sign the bid for and on behalf of: _____ *[insert complete name of Bidder]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Price Schedule Forms

*[The Bidder shall fill in these Price Schedule Forms in accordance with the instructions indicated. The list of line items in column 1 of the **Price Schedules** shall coincide with the List of Goods and Related Services specified by the Purchaser in the Schedule of Requirements.]*

The bidder should fill in the price schedule forms individually earmarked for prices from i) outside the purchaser's country to be imported, ii) outside the purchaser's country already imported and iii) purchaser's country . Formats of all these forms are provided below.

i) Price Schedule: Goods Manufactured Outside the Purchaser’s Country, to be Imported

(Group C bids, goods to be imported)							Date: _____	
							NCB No: _____	
							Alternative No: _____	
Currencies in accordance with ITB Sub-Clause 15							Page N° _____ of _____	
1	2	3	4	5	6	7	8	9
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price CIP [insert place of destination] in accordance with ITB 14.6(b) (i)	CIP Price per line item (Col. 5x6)	Price per line item for inland transportation and other services required in the Purchaser’s country to convey the Goods to their final destination specified in BDS	Total Price per Line item (Col. 7+8)
[insert number of the item]	[insert name of good]	[insert country of origin of the Good]	[insert quoted Delivery Date]	[insert number of units to be supplied and name of the physical unit]	[insert unit price CIP per unit]	[insert total CIP price per line item]	[insert the corresponding price per line item]	[insert total price of the line item]
A)	Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES),			1				
B)	X-Ray Fluorescence Spectrometer			1				
C)	Solid Waste Extraction Assembly,			1				
D)	Bomb Calorimeter			1				
Total Price								

Name of Bidder [insert complete name of Bidder] Signature of Bidder [signature of person signing the Bid] Date [Insert Date]

(*) : The unit price of the equipment has to be quoted along with accessories strictly as per TS (Technical Specification)

ii) Price Schedule: Goods Manufactured Outside the Purchaser's Country, already imported

(Group C bids, Goods already imported)											Date: _____
Currencies in accordance with ITB Sub-Clause 15											ICB No: _____
Currencies in accordance with ITB Sub-Clause 15											Alternative No: _____
Currencies in accordance with ITB Sub-Clause 15											Page N° _____ of _____
1	2	3	4	5	6	7	8	9	10	11	12
Line Item N°	Description of Goods	Country of Origin	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price including Custom Duties and Import Taxes paid, in accordance with ITB 14.6(c)(i)	Custom Duties and Import Taxes paid per unit in accordance with ITB 14.6(c)(ii) , [to be supported by documents]	Unit Price net of custom duties and import taxes, in accordance with ITB 14.6 (c) (iii) (Col. 6 minus Col.7)	Price per line item net of Custom Duties and Import Taxes paid, in accordance with ITB 14.6(c)(i) (Col. 5×8)	Price per line item for inland transportation and other services required in the Purchaser's country to convey the goods to their final destination, as specified in BDS in accordance with ITB 14.6 (c)(v)	Sales and other taxes paid or payable per item if Contract is awarded (in accordance with ITB 14.6(c)(iv)	Total Price per line item (Col. 9+10)
[insert number of the item]	[insert name of Goods]	[insert country of origin of the Good]	[insert quoted Delivery Date]	[insert number of units to be supplied and name of the physical unit]	[insert unit price per unit]	[insert custom duties and taxes paid per unit]	[insert unit price net of custom duties and import taxes]	[insert price per line item net of custom duties and import taxes]	[insert price per line item for inland transportation and other services required in the Purchaser's country]	[insert sales and other taxes payable per item if Contract is awarded]	[insert total price per line item]
A)	Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES), (*)			1							
B)	X-Ray Fluorescence Spectrometer (*)			1							
C)	Solid Waste Extraction Assembly, (*)			1							
D)	Bomb Calorimeter (*)			1							
										Total Bid Price	

Name of Bidder [insert complete name of Bidder] Signature of Bidder [signature of person signing the Bid] Date [insert date]

(*) : The unit price of the equipment has to be quoted along with accessories strictly as per TS (Technical Specification)

iii) Price Schedule: Goods Manufactured in the Purchaser's Country

Purchaser's Country		(Group A and B bids)								Date: _____
_____		Currencies in accordance with ITB Sub-Clause 15								ICB No: _____
										Alternative No: _____
										Page N° _____ of _____
1	2	3	4	5	6	7	8	9	10	
Line Item N°	Description of Goods	Delivery Date as defined by Incoterms	Quantity and physical unit	Unit price EXW	Total EXW price per line item (Col. 4x5)	Price per line item for inland transportation and other services required in the Purchaser's Country to convey the Goods to their final destination	Cost of local labor, raw materials and components from with origin in the Purchaser's Country % of Col. 5	Sales and other taxes payable per line item if Contract is awarded (in accordance with ITB 14.6(a)(ii))	Total Price per line item (Col. 6+7)	
[insert number of the item]	[insert name of Good]	[insert quoted Delivery Date]	[insert number of units to be supplied and name of the physical unit]	[insert EXW unit price]	[insert total EXW price per line item]	[insert the corresponding price per line item]	[Insert cost of local labor, raw material and components from within the Purchase's country as a % of the EXW price per line item]	[insert sales and other taxes payable per line item if Contract is awarded]	[insert total price per item]	
A)	Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES), (*)		1							
B)	X-Ray Fluorescence Spectrometer (*)		1							
C)	Solid Waste Extraction Assembly, (*)		1							
D)	Bomb Calorimeter (*)		1							
								Total Price		

Name of Bidder [insert complete name of Bidder] Signature of Bidder [signature of person signing the Bid] Date [insert date]

(*) : The unit price of the equipment has to be quoted along with accessories strictly as per TS (Technical Specification)

Price and Completion Schedule – Related Services

Currencies in accordance with ITB Sub-Clause 15						Date: _____
						ICB No: _____
						Alternative No: _____
						Page N° _____ of _____
1	2	3	4	5	6	7
Service N°	Description of Services (excludes inland transportation and other services required in the Purchaser’s country to convey the goods to their final destination)	Country of Origin	Delivery Date at place of Final destination	Quantity and physical unit	Unit price	Total Price per Service (Col. 5*6 or estimate)
<i>[insert number of the Service]</i>	<i>[insert name of Services]</i>	<i>[insert country of origin of the Services]</i>	<i>[insert delivery date at place of final destination per Service]</i>	<i>[insert number of units to be supplied and name of the physical unit]</i>	<i>[insert unit price per item]</i>	<i>[insert total price per item]</i>
ITEM No.A	Installation (for ICP)					
	Demonstration (for ICP)					
	Training (for ICP)					
	AMC for 3 years - ICP					
ITEM No.B	Installation (for item no. B - XRF)					
	Demonstration (for XRF)					
	Training (for XRF)					
	AMC for 3 years –XRF					
ITEM No.C	Installation (for item no. C - SWE)					
	Demonstration (for SWE)					
	Training (for SWE)					
	AMC for 3 years - SWE					
ITEM No.D	Installation (for item no. D – Bomb Calorimeter)					
	Demonstration (for Bomb Calorimeter)					
	Training (for Bomb Calorimeter)					

	AMC for 3 years - SWE					
Total Bid Price						

Name of Bidder *[insert complete name of Bidder]* Signature of Bidder *[signature of person signing the Bid]* Date *[insert date]*

Bid Security (Bank Guarantee)

[The Bank shall fill in this Bank Guarantee Form in accordance with the instructions indicated.]

[Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: _____ *[Name and Address of Purchaser]*

Date: _____

BID GUARANTEE No.: _____

We have been informed that *[name of the Bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of *[name of contract]* under Invitation for Bids No. *[IFB number]* ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *[name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures] ([amount in words])* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the performance security, if required, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

Bid Security (Bid Bond)

[The Surety shall fill in this Bid Bond Form in accordance with the instructions indicated.]

BOND NO. _____

BY THIS BOND *[name of Bidder]* as Principal (hereinafter called “the Principal”), and *[name, legal title, and address of surety]*, **authorized to transact business in** *[name of country of Purchaser]*, as Surety (hereinafter called “the Surety”), are held and firmly bound unto *[name of Purchaser]* as Obligee (hereinafter called “the Purchaser”) in the sum of *[amount of Bond]*⁶ *[amount in words]*, for the payment of which sum, well and truly to be made, we, the said Principal and Surety, bind ourselves, our successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has submitted a written Bid to the Purchaser dated the ____ day of _____, 20__, for the construction of *[name of Contract]* (hereinafter called the “Bid”).

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal:

- (a) withdraws its Bid during the period of bid validity specified in the Form of Bid; or
- (b) having been notified of the acceptance of its Bid by the Purchaser during the period of Bid validity; (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the Performance Security, if required, in accordance with the Instructions to Bidders.

then the Surety undertakes to immediately pay to the Purchaser up to the above amount upon receipt of the Purchaser’s first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser shall state that the demand arises from the occurrence of any of the above events, specifying which event(s) has occurred.

The Surety hereby agrees that its obligation will remain in full force and effect up to and including the date 28 days after the date of expiration of the Bid validity as stated in the Invitation to Bid or extended by the Purchaser at any time prior to this date, notice of which extension(s) to the Surety being hereby waived.

IN TESTIMONY WHEREOF, the Principal and the Surety have caused these presents to be executed in their respective names this ____ day of _____ 20__.

Principal: _____ Surety: _____
 Corporate Seal (where appropriate)

(Signature)
(Printed name and title)

(Signature)
(Printed name and title)

⁶ The amount of the Bond shall be denominated in the currency of the Purchaser’s country or the equivalent amount in a freely convertible currency.

Bid-Securing Declaration

[The Bidder shall fill in this Form in accordance with the instructions indicated.]

Date: *[date (as day, month and year)]*

Bid No.: *[number of bidding process]*

Alternative No.: *[identification No if this is a Bid for an alternative]*

To: *[complete name of Purchaser]*

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration.

We accept that we will automatically be suspended from being eligible for bidding in any contract with the Purchaser for the period of time of *[number of months or years]* starting on *[date]*, if we are in breach of our obligation(s) under the bid conditions, because we:

- (a) have withdrawn our Bid during the period of bid validity specified in the Form of Bid; or
- (b) having been notified of the acceptance of our Bid by the Purchaser during the period of bid validity, (i) fail or refuse to execute the Contract; or (ii) fail or refuse to furnish the Performance Security, if required, in accordance with the ITB.

We understand this Bid Securing Declaration shall expire if we are not the successful Bidder, upon the earlier of (i) our receipt of your notification to us of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of our Bid.

Signed: *[signature of person whose name and capacity are shown]* In the capacity of *[legal capacity of person signing the Bid Securing Declaration]*

Name: *[complete name of person signing the Bid Securing Declaration]*

Duly authorized to sign the bid for and on behalf of: *[complete name of Bidder]*

Dated on _____ day of _____, _____ *[date of signing]*
Corporate Seal (where appropriate)

[Note: In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.]

Manufacturer's Authorization

*[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS**.]*

Date: *[insert date (as day, month and year) of Bid Submission]*

ICB No.: *[insert number of bidding process]*

Alternative No.: *[insert identification No if this is a Bid for an alternative]*

To: *[insert complete name of Purchaser]*

WHEREAS

We *[insert complete name of Manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of Manufacturer's factories]*, do hereby authorize *[insert complete name of Bidder]* to submit a bid the purpose of which is to provide the following Goods, manufactured by us *[insert name and or brief description of the Goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Manufacturer]*

Title: *[insert title]*

Dated on _____ day of _____, _____ *[insert date of signing]*

Section V. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:

Para 1.8 (a) (i): as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the Goods or Works required, or

Para 1.8 (a) (ii): by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.

2. For the information of bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:

(a) With reference to paragraph 1.8 (a) (i) of the Guidelines:

(b) With reference to paragraph 1.8 (a) (ii) of the Guidelines:

PART 2 – Supply Requirements

Section VI. Schedule of Requirements

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1. List of Goods and Delivery Schedule

[The Purchaser shall fill in this table, with the exception of the column “Bidder’s offered Delivery date” to be filled by the Bidder]

Line Item N°	Description of Goods	Quantity	Physical unit	Bid Security In INR	Final (Project Site) Destination as specified in BDS	Delivery (as per Incoterms) Date		
						Earliest Delivery Date	Latest Delivery Date	Bidder’s offered Delivery date [to be provided by the bidder]
A)	A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)	1	Number.	Rs.1,20,000/- (US\$ 2400)	West Bengal Pollution Control Board, “Paribesh Bhavan:.,Kolkata	Any day after the date of opening of LC or Contract signing –as applicable	Latest by 90 days from the date of opening of LC for foreign supply or Contract signing for supply from purchaser’s country	
B)	B) X-ray Fluorescence Spectrometer	1	Number	Rs 3,00,000/- (US\$ 6000)	Do	Do	Do	
C)	C) Solid Waste Extraction Assembly	1	Number.	Rs. 1,50,000/- (US\$ 3000)	Do	Do	Do	
D)	D) Bomb Calorimeter	1	Number.	Rs. 30,000/- (US\$ 600)	Do	Do	Do	

2. List of Related Services and Completion Schedule

[This table shall be filled in by the Purchaser. The Required Completion Dates should be realistic, and consistent with the required Goods Delivery Dates (as per Incoterms)]

Service	Description of Service	Quantity ¹	Physical Unit	Place where Services shall be performed	Final Completion Date(s) of Services
1	Installation	--	--	West Bengal Pollution Control Board, "Paribesh Bhavan", Kolkata	Within 15 days of delivery at site
2	Demonstration of Sample Testing / Analysis	--	--	- do -	Within 30 days of delivery at site
3	On-site Training of technical personnel (as per specification sheet)	--	--	- do -	Within 35 days of delivery at site
4	AMC for 3 years			-do-	

1. If applicable

3. Technical Specifications

Summary of Technical Specifications. The Goods and Related Services shall comply with following Technical Specifications and Standards:

Item No	Name of Goods or Related Service	Technical Specifications and Standards
A)	Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)	Appendix – 1
B)	X-ray Fluorescence Spectrometer	Appendix – 2
C)	Solid Waste Extraction Assembly	Appendix – 3
D)	Bomb Calorimeter	Appendix – 4

Detailed Technical Specifications and Standards [whenever necessary].

[Insert detailed description of TS]

_____”

]

4. Drawings

These Bidding Documents includes *no* drawings.

5. Inspections and Tests

The following inspections and tests shall be performed:

All equipment need the following services:

1. Installation and commissioning
2. Calibration of the equipment with standards
3. Demonstration and On-site training of staffs
4. Three Running trails with the samples provided by borrower

PART 3 - Contract

Section VII. General Conditions of Contract

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Section VII. General Conditions of Contract

Definitions

- 1.1 The following words and expressions shall have the meanings hereby assigned to them:
- (a) “Bank” means the World Bank and refers to the International Bank for Reconstruction and Development (IBRD) or the International Development Association (IDA).
 - (b) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
 - (c) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
 - (d) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
 - (e) “Day” means calendar day.
 - (f) “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
 - (g) “GCC” means the General Conditions of Contract.
 - (h) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
 - (i) “Purchaser’s Country” is the country specified in the Special Conditions of Contract (SCC).
 - (j) “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.
 - (k) “Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract.

- (l) “SCC” means the Special Conditions of Contract.
- (m) “Subcontractor” means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (n) “Supplier” means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.
- (o) “The Project Site,” where applicable, means the place named in the SCC.

Contract Documents

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

Fraud and Corruption

3.1 If the Purchaser determines that the Supplier and/or any of its personnel, or its agents, or its Subcontractors, consultants, service providers, suppliers and/or their employees has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 14 days notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 35 shall apply as if such expulsion had been made under Sub-Clause 35.1.

- (a) For the purposes of this Sub-Clause:
 - (i) “corrupt practice” is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party⁷;
 - (ii) “fraudulent practice” is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation⁸;

⁷ “Another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

- (iii) “collusive practice” is an arrangement between two or more parties⁹ designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice” is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party¹⁰;
- (v) “obstructive practice” is
 - (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
 - (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under Clause 11 [Inspections and Audits by the Bank].

3.2 Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the purchase of the Goods, then that employee shall be removed.

Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

- (a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

⁸ “Party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

⁹ “Parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

¹⁰ “Party” refers to a participant in the procurement process or contract execution.

- (b) The terms EXW, CIP, FCA, CFR and other similar terms, when used, shall be governed by the rules prescribed in the current edition of Incoterms specified in the **SCC** and published by the International Chamber of Commerce in Paris, France.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the **SCC**. Supporting documents and printed literature that are part of the Contract may be in another language provided they

are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern.

- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.
- Joint Venture,
Consortium or
Association**
- 6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
- Eligibility**
- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.
- 7.2 All Goods and Related Services to be supplied under the Contract and financed by the Bank shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.
- Notices**
- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term “in writing” means communicated in written form with proof of receipt.
- 8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.
- Governing Law**
- 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser’s Country, unless otherwise specified in the SCC.
- Settlement of
Disputes**
- 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If, after twenty-eight (28) days, the parties have failed to resolve

their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier 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. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.3 Notwithstanding any reference to arbitration herein,

- (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and
- (b) the Purchaser shall pay the Supplier any monies due the Supplier.

**Inspections and
Audit by the Bank**

11.1 The Supplier shall permit, and shall cause its Subcontractors and consultants to permit, the Bank and/or persons appointed by the Bank to inspect the Supplier's offices and all accounts and records relating to the performance of the Contract and the submission of the bid, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank. The Supplier's and its Subcontractors and consultants' attention is drawn to Clause 3 [Fraud and Corruption], which provides, inter alia, that acts intended to materially impede the exercise of the Bank's inspection and audit rights provided for under this Sub-Clause 11.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility pursuant to the Bank's prevailing sanctions procedures).

Scope of Supply

12.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.

**Delivery and
Documents**

13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. The details of shipping and other documents to be furnished by the Supplier are specified in the **SCC.**

**Supplier's
Responsibilities**

14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC

Clause 13.

- Contract Price** 15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the **SCC**.
- Terms of Payment** 16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the **SCC**.
- 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
- 16.4 The currencies in which payments shall be made to the Supplier under this Contract shall be those in which the bid price is expressed.
- 16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the **SCC**, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the **SCC**, for the period of delay until payment has been made in full, whether before or after judgment or arbitration award.
- Taxes and Duties** 17.1 For goods manufactured outside the Purchaser's Country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's Country.
- 17.2 For goods Manufactured within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- Performance Security** 18.1 If required as specified in the **SCC**, the Supplier shall, within

twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the **SCC**.

- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 As specified in the SCC, the Performance Security, if required, shall be denominated in the currency(ies) of the Contract, or in a freely convertible currency acceptable to the Purchaser; and shall be in one of the format stipulated by the Purchaser in the **SCC**, or in another format acceptable to the Purchaser.
- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the **SCC**.

Copyright

- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

**Confidential
Information**

- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.
- 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

- 20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:
- (a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;
 - (b) now or hereafter enters the public domain through no fault of that party;
 - (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
 - (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.
- 20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

Subcontracting

- 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
- 21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

Specifications and Standards

- 22.1 Technical Specifications and Drawings
- (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.
 - (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such

disclaimer to the Purchaser.

- (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

Packing and Documents

- 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.
- 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the **SCC**, and in any other instructions ordered by the Purchaser.

Insurance

- 24.1 Unless otherwise specified in the **SCC**, the Goods supplied under the Contract shall be fully insured—in a freely convertible currency from an eligible country—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the **SCC**.

Transportation

- 25.1 Unless otherwise specified in the **SCC**, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.

Inspections and Tests

- 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **SCC**.
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the **SCC**. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance,

including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.

- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

- Liquidated Damages** 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the

Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those **SCC**. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

Warranty

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

Patent Indemnity

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the

Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

- 29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.
- 29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.
- 29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.
- 29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise

existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

Limitation of Liability

- 30.1 Except in cases of criminal negligence or willful misconduct,
- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and
 - (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement

Change in Laws and Regulations

- 31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.

Force Majeure

- 32.1 The Supplier 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.
- 32.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in

its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.

32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier 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.

**Change Orders and
Contract
Amendments**

33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its

cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34;
 - (ii) if the Supplier fails to perform any other obligation under the Contract; or
 - (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.
- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter

to the Purchaser

35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

Assignment

- 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

Export Restriction

- 37.1 Notwithstanding any obligation under the Contract to complete all export formalities, any export restrictions attributable to the Purchaser, to the country of the Purchaser, or to the use of the products/goods, systems or services to be supplied, which arise from trade regulations from a country supplying those products/goods, systems or services, and which substantially impede the Supplier from meeting its obligations under the Contract, shall release the Supplier from the obligation to provide deliveries or services, always provided, however, that the Supplier can demonstrate to the satisfaction of the Purchaser and of the Bank that it has completed all formalities in a timely manner, including applying for permits, authorizations and licenses necessary for the export of the products/goods, systems or services under the terms of the Contract. Termination of the Contract on this basis shall be for the Purchaser's convenience pursuant to Sub-Clause 35.3.

Section VIII. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(j)	The Purchaser's country is: India
GCC 1.1(k)	The Purchaser is: West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III,Bidhannagar,Kolkata-700098,India. Ph. 91-33-23351623,Fax-91-33-23352813
GCC 1.1 (q)	The Project Site(s)/Final Destination(s) is/are: West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III,Bidhannagar,Kolkata-700098,India
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms. If the meaning of any trade term and the rights and obligations of the parties there under shall not be as prescribed by Incoterms,
GCC 4.2 (b)	The version edition of Incoterms shall be <i>2000 edition</i>
GCC 5.1	The language shall be: English
GCC 8.1	For notices , the Purchaser's address shall be: Attention: Dr. Ujjal Mukhopadhyay, Chief Scientist Address: West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III,Bidhannagar,Kolkata-,India City: Kolkata Pin Code: 700098 Country: India Telephone: +91-33-23351623 Facsimile number: +91-33-23352813 Electronic mail address: ujjal@wbpcb.gov.in
GCC 9.1	The governing law shall be the law of: India

<p>GCC 10.2</p>	<p>The rules of procedure for arbitration proceedings pursuant to GCC Clause 10.2 shall be as follows:</p> <p style="text-align: center;"><i>“Clause 10.2 (a) shall be retained in the case of a Contract with a foreign Supplier and clause 10.2 (b) shall be retained in the case of a Contract with a national of the Purchaser’s country.”]</i></p> <p>(a) Contract with foreign Supplier:</p> <p>GCC 10.2 (a)—Any dispute, controversy or claim arising out of or relating to this Contract, or breach, termination or invalidity thereof, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.</p> <p>The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the parties, and shall act as presiding arbitrator. In case of failure of the 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 Indian Council of Arbitration</p> <p>(b) Contracts with Supplier national of the Purchaser’s country:</p> <p>In case of Dispute or difference arising between the Purchaser and a domestic supplier 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 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the 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 Indian Council of Arbitration.</p> <p>(c) If one of the parties fails to appoint its arbitrator in pursuance of sub-clause (a) and (b) above, within 30 days after receipt of the notice of the appointment of its arbitrator by the other party, then the “The International Centre for Alternative Dispute Resolution (India), both in cases of the Foreign supplier as well as Indian supplier, shall appoint the arbitrator. A certified copy of the order of the “The International Centre for Alternative Disputes Resolution (India), making such an appointment shall be furnished to each of the parties.</p> <p>(d) Arbitration proceedings shall be held at Kolkata, India, and the language of the arbitration proceedings and that of all documents and communications between the parties shall be English.</p> <p>(e) The decision of the majority of arbitrators shall be final and binding upon both</p>
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	<p>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.</p> <p>(f) 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 “The International Centre for Alternative Dispute Resolution (India)</p>
<p>GCC 13.1</p>	<p>Details of Shipping and other Documents to be furnished by the Supplier are :</p> <p><i>(a) For Goods supplied from abroad:</i></p> <p>Upon delivery of the goods to the consignee the supplier shall notify the purchaser and mail the following documents to the purchaser and Bank (in case of LC payment):</p> <ul style="list-style-type: none"> (i) One original and two copies of Supplier’s invoice showing contract number, goods description, quantity, unit price and total amount (ii) Copy of Airway /Seaway Bill marked freight prepaid (iii) Three Copies of packing list identifying contents of each package (iv) Insurance certificate (v) Manufacturer’s/Supplier’s warranty certificate (vi) Manufacturer’s Test report (vii) Certificate of origin <p>Transshipment is allowed. Partial shipment is not allowed</p> <p><i>(b) For Goods from within India:</i></p> <p>Upon delivery of the goods to the consignee, the supplier shall notify the purchaser and mail the following documents to the Purchaser:</p> <ul style="list-style-type: none"> (i) One original and two copies of the Supplier invoice showing contract number, goods description, quantity, unit price, total amount (ii) Delivery note and acknowledgement of receipt of goods duly sealed and signed by the Consignee (iii) Three copies of packing list identifying contents of each package (iv) Insurance Certificate (v) Manufacturer’s/Supplier’s warranty certificate (vi) Inspection Certificate issued by the nominated inspection agency vii)Certificate of Origin. viii) Original Copy of Excise duty Gate Pass (Duplicate copy of excise duty gate pass may be sent with transporter)

	<p>The above documents shall be received by the Purchaser before arrival of the Goods and, if not received, the Supplier will be responsible for any consequent expenses.</p>
<p>GCC 15.1</p>	<p>The prices charged for the Goods supplied and the related Services performed <i>shall not be adjustable</i>.</p>
<p>GCC 16.1</p>	<p>Payment for Goods supplied from abroad:</p> <p>Payment of foreign currency portion shall be made in the following manner:</p> <p>(i) On Shipment: Ninety (90) percent of the Contract Price of the Goods shipped shall be paid through irrevocable advance confirmed letter of credit opened in favor of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 12.</p> <p>(iii) On Acceptance: Ten (10) percent of the Contract Price of Goods received shall be paid through irrevocable advance confirmed letter of credit opened in favor of the Supplier in a bank in its country within thirty (30) days of receipt of the Goods, successful installation and handing over of the equipments upon submission of claim supported by the certificate issued by the Purchaser.</p> <p><i>Payment of Local Currency Portion including Agency Commission:</i> Payment shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.</p> <p>Agency commission will be paid to the Bidder's Agent in the local currency for the amount in Indian Rupees indicated in the relevant price schedule <i>[using telegraphic transfer buying market rate of exchange ruling on the date of award of the contract]</i> and shall not be subject to further escalation or exchange variation. Payment shall be made within 30 days of presentation of claim supported by a certificate from the Purchaser declaring that the goods have been delivered and that all other contracted services have been performed.</p> <p>Payment for Goods and Services supplied from within the Purchaser's country:</p> <p>Payment for Goods and Services supplied from within the Purchaser's country shall be made in INR as follows:</p> <p>(i) On Delivery: Seventy (90) percent of the Contract Price shall be paid on</p>

	<p>receipt of the Goods and upon submission of the documents specified in GCC Clause 13.</p> <p>(iii) On Acceptance: The remaining thirty (10) percent of the Contract Price shall be paid to the Supplier within thirty (30) days after receipt of the Goods, successful installation and handing over of the equipments upon submission of claim supported by the certificate issued by the Purchaser.</p>
GCC 16.5	<p>The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 30 days after acceptance of equipment.</p> <p>The interest rate that shall be 14% p.a.</p>
GCC 18.1	<p>Performance security is a compulsory obligation and covers the entire scope of work from signing of the contract to completion of the AMC period as per this bid document. A Performance Security shall have to be submitted in prescribed pro-forma within 28 days after the Supplier's receipt of Notification of Award. The supplier shall furnish Performance Security to the Purchaser for an amount of 10% of the total contract value, valid up to 28 days after the date of completion of performance obligations including warranty obligations.</p> <p>In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/ replaced material shall be extended to a further period of 12 months and the Performance Bank guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.”</p>
GCC 18.3	<p>The Performance Security shall be in the form of an irrevocable Bank Guarantee or “a cashier's cheque or banker's certified cheque or crossed demand draft or pay order” drawn in favour of the Purchaser. If required, the Performance security shall be denominated in “ the currencies of payment of the Contract, in accordance with their portions of the Contract Price”</p> <p>Bank Guarantee is to be issued by any reputed Indian Bank or Foreign Commercial Bank having license to do business in India in favour of West Bengal Pollution Control Board</p>
GCC 18.4	<p>Discharge of the Performance Security shall take place within 28 days after completion of warranty period.</p>
GCC 23.2	<p>The packing, marking and documentation within and outside the packages shall be:</p> <p>Each package will be marked on three sides with proper paint/indelible ink, the following:</p> <p>i) Project ii) Contract No. iii) Country of Origin of Goods iv) Supplier's Name and v) Packing list reference number vi) CBIPMP SUPPLIES-NOT FOR SALE vii) Purchaser address.</p>

GCC 24.1	The insurance coverage shall be as specified in the Incoterms.
GCC 25.1	<p>Responsibility for transportation of the Goods shall be as specified in the Incoterms.</p> <p>If not in accordance with Incoterms, responsibility for transportations shall be as follows:</p> <p>The Supplier is required under the Contract to transport the Goods to a specified place of final destination within the Purchaser's country, defined as the Project Site, transport to such place of destination in the Purchaser's country, including insurance and storage, as shall be specified in the Contract, shall be arranged by the Supplier, and related costs shall be included in the Contract Price.</p>
GCC 26.1	<p>The inspections and tests shall be carried by authorized representative of the Purchaser.</p> <p>In case of foreign supplier, no pre despatch inspection is envisaged and supplier shall furnish factory test / inspection reports of the manufacturer along with the despatch documents. However, the Board reserves the right to appoint at its cost, any inspection agency (other than suggested by suppliers) which will be binding on the supplier.</p> <p>In the case of supplies from inside India, the supplier has to obtain MDCC prior to dispatch of the equipment. The Board reserves the right to issue the MDCC through pre despatch inspection or otherwise. The equipment should be despatched only after issuance of Material Despatch Clearance Certificate (MDCC) by the Board.</p> <p>The Board's right to inspect, test and, where necessary, reject the Equipment after the Equipment's arrival in India shall in no way be 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.</p>

GCC 26.2	<p>The Inspections and tests shall be conducted at West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III,Bidhannagar,Kolkata-700098,India</p> <p>The Inspections and tests shall be conducted at as specified in the technical specifications and specific requirements as under;</p> <ol style="list-style-type: none"> 1. The purchaser or its authorized representative shall have complete authority to inspect and /or test any or all of the goods in order to verify their conformity to the technical specifications and other required criteria. 2. The purchaser or its authorized representative shall be free to inspect the premises of the manufacturer prior to the award of the contract or at any stage of the contract execution. This would be centered on examination of manufacturer's capacity and physical existence of the manufacturing unit(s) and related offices. 3. The purchaser or its authorized representative shall invariably inspect and / or test the goods or equipments prior to the dispatch from the manufacturer's premises. Such inspection, test, and clearance shall not prejudice the right of the consignee to inspect and test the goods received at final destination. 4. In the event that the manufacturer's premises are outside India, the purchaser shall be fully authorized to conduct such inspection and tests in the manner it decides suitable and even can hire an agency for the purposes of pre-dispatch-inspection at the manufacturer's premises. <p>The inspections and tests shall be based upon the requirements of technical specifications. However, the purchaser shall have authority to decide on any other technical tests or inspection based on technical parameters that it finds fit to complement the same. The supplier shall be bound to introduce any such corrective measure instructed by the purchaser.</p>
GCC 27.1	<p>The liquidated damages shall be @ 0.5% per week of delay on prorated basis</p>
GCC 27.1	<p>The maximum amount of liquidated damages shall be 10%</p>
GCC 28.3	<p>The period of validity of the Warranty shall be: 24 months from shipping date or 18 months from acceptance -whichever is earlier. AMC would cover the period after expiry of warranty period.</p> <p>Performance security of 10 % would be reduced to 5 % during AMC.</p> <p>For purposes of the Warranty, the place(s) of final destination(s) shall be: West Bengal Pollution Control Board,"Paribesh Bhavan" 10A,Block-LA,Sector-III,Bidhannagar,Kolkata-700098,India</p> <p>In partial modification of the provisions, the warranty period shall be 24 months from shipping date or 18 months from acceptance -whichever is earlier.</p> <p>The Supplier shall, in addition, comply with the performance and/or consumption</p>

guarantees specified under the contract. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

- (a) make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense (including all statutory taxes and duties, customs/excise duty, clearance charges etc., if any, as applicable) and to carry out further performance tests in accordance with SCC 4 ;
OR
- (b) pay liquidated damages to the Purchaser with respect to the failure to meet the contractual guarantees. The rate of these liquidated damages shall be 10% as specified in Technical Specifications.
- (c) The period for correction of defects in the warranty period is 30 days.
- (d) If any equipment/s gives continuous trouble, say four times in one month during the warranty period, the supplier shall replace the equipment with new one without any additional cost to the purchaser.
- (e) The supplier should provide 3 nos. of preventive maintenance services yearly during the warranty period which will be other than breakdown calls (if any).
- (e) The warranty shall also cover all the consumables parts, accessories, vacuumatic products.

The Supplier will accomplish preventive and breakdown maintenance activities to ensure that all equipments execute without defect or interruption for at least 98% uptime for 24 hours a day, 7 days a week of operation of the machine worked on a quarterly basis.

If any critical component of the entire configuration is out of service for more than three days, the Supplier shall either immediately replace the defective unit or replace it at its own cost.

The Supplier will respond to a site visit and commence repair work on the equipment within 24 hours of being notified of equipment malfunction.

For purposes of the Warranty, the place(s) of final destination(s) shall be **West Bengal Pollution Control Board**, "Paribesh Bhavan" 10A, Block-LA, Sector-III, Bidhannagar, Kolkata-700098, India.
Ph. 91-33-23351623, Fax-91-33-23352813

<p>GCC 28.5</p>	<p>The period for repair or replacement shall be: <i>20</i> days.</p> <p>Upon receipt of such notice, the Supplier shall, within the period specified in SCC and with all reasonable speed, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever, shall lie on the Purchaser for the replaced parts/goods thereafter.</p> <p>In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months.”</p> <p>If any equipment/s gives continuous trouble, say four times in one month during the warranty period, the supplier shall replace the equipment with new one without any additional cost to the purchaser.</p>
<p>GCC 28.7</p>	<p>Maintenance Service</p>
<p>GCC 28.7.1</p>	<p>Free maintenance services shall be provided by the supplier during the period of warranty. After warranty period, annual maintenance and repairs of the entire system [excluding spares and consumable items] for next 36 months will be done by the supplier.</p>
<p>GCC 28.7.2</p>	<p>The maximum response time for a maintenance complaint from any of the destination specified in the schedule of requirements (i.e. time required for supplier’s maintenance engineers to report to the installations after a request call/telegram/fax is made or letter is written) shall not exceed 20 DAYS</p>

Attachment: Price Adjustment Formula

Nil

Section IX. Contract Forms

Table of Forms

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1. Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS CONTRACT AGREEMENT is made

the *[insert: **number**]* day of *[insert: **month**]*, *[insert: **year**]*.

BETWEEN

(1) **West Bengal Pollution Control Board, represented by Member Secretary, WBPCB and Project Director, CBIPM Project**, under administrative control of Department of Environment, Government of West Bengal, India having its principal place of business at **"Paribesh Bhavan" 10A, Block-LA, Sector-III, Bidhannagar, Kolkata-700098** (hereinafter called "the Purchaser"), and

(2) *[insert name of Supplier]*, a corporation incorporated under the laws of *[insert: country of Supplier]* and having its principal place of business at *[insert: address of Supplier]* (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called "the Contract Price").

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 constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
 - (a) This Contract Agreement
 - (b) Special Conditions of Contract
 - (c) General Conditions of Contract
 - (d) Technical Requirements (including Schedule of Requirements and Technical Specifications)
 - (e) The Supplier's Bid and original Price Schedules
 - (f) The Purchaser's Notification of Award
 - (g) *[Add here any other document(s)]*

3. 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.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services 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.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed:

in the capacity of **Project Director, CBIPM Project,**
West Bengal Pollution Control Board, "Paribesh Bhavan"
10A,Block-LA,Sector-III, Bidhannagar,Kolkata-700098,India.

in the presence of

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

2. Performance Security

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*
ICB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Purchaser]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)¹¹ in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,¹² and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signatures of authorized representatives of the bank and the Supplier]

¹¹ The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Purchaser.

¹² Dates established in accordance with Clause 18.4 of the General Conditions of Contract ("GCC"), taking into account any warranty obligations of the Supplier under Clause 16.2 of the GCC intended to be secured by a partial Performance Guarantee. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Purchaser might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed [six months] [one year], in response to the Purchaser's written request for such extension, such request to be presented to us before the expiry of the Guarantee."

3. Bank Guarantee for Advance Payment

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated.]

Date: *[insert date (as day, month, and year) of Bid Submission]*
ICB No. and title: *[insert number and title of bidding process]*

[bank's letterhead]

Beneficiary: *[insert legal name and address of Purchaser]*

ADVANCE PAYMENT GUARANTEE No.: *[insert Advance Payment Guarantee no.]*

We, *[insert legal name and address of bank]*, have been informed that *[insert complete name and address of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert date of Agreement]* with you, for the supply of *[insert types of Goods to be delivered]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance is to be made against an advance payment guarantee.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount(s)]¹³ in figures and words* upon receipt by us of your first demand in writing declaring that the Supplier is in breach of its obligation under the Contract because the Supplier used the advance payment for purposes other than toward delivery of the Goods.

It is a condition for any claim and payment under this Guarantee to be made that the advance payment referred to above must have been received by the Supplier on its account *[insert number and domicile of the account]*

This Guarantee shall remain valid and in full effect from the date of the advance payment received by the Supplier under the Contract until *[insert date]¹⁴*.

This Guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s) of authorized representative(s) of the bank]

¹³ The bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Purchaser.

¹⁴ Insert the Delivery date stipulated in the Contract Delivery Schedule. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Purchaser might consider adding the following text to the Form, at the end of the penultimate paragraph: "We agree to a one-time extension of this Guarantee for a period not to exceed *[six months]**[one year]*, in response to the Purchaser's written request for such extension, such request to be presented to us before the expiry of the Guarantee."

Invitation for Bids (IFB)

Country : **India**

Name of Project : **Capacity Building Industrial Pollution Management Project (CBIPMP)**

Credit No. : Loan no-7924-IN AND CREDIT NO-4755-IN

IFB Title : Supply , Installation, commissioning and handing over of Laboratory
Equipment under CBIPMP

IFB Number : .

1. This Invitation for Bids follows the General Procurement Notice WB2018 for this Project that appeared in *Development Business*, on 08.05.2010¹

2. The *Government of India* has received applied loan/credit from the *International Bank for Reconstruction and Development / International Development Association* toward the cost of **Capacity Building Industrial Pollution Management Project (CBIPMP)**, and it intends to apply part of the proceeds of this *loan / credit* to payments under the Contract for **Supply and Installation ,commissioning and handing over of Laboratory Equipment under CBIPMP**

3. The *West Bengal Pollution Control Board, Kolkata* now invites sealed bids from eligible and qualified bidders for :

A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES) =1no.

B) X-ray Fluorescence Spectrometer =1 no

C) Solid Waste Extraction Assembly=1no

D) Bomb Cal-orimeter =1 no.

4. Bidding will be conducted through the International Competitive Bidding (ICB) procedures specified in the World Bank's *Guidelines: Procurement under IBRD Loans and IDA Credits*, and is open to all bidders from Eligible Source Countries as defined in the Guidelines.⁵

5. Interested eligible bidders may obtain further information from Dr. Ujjal Mukhopadhyay, Head Infrastructure Cell, CBIPM Project, *West Bengal Pollution Control Board, Kolkata* and inspect the Bidding Documents at the address given below

West Bengal Pollution Control Board, "Paribesh Bhavan" 10A, Block-LA, Sector-III, Bidhannagar, Kolkata-700098, India

6. Qualifications requirements including *technical, financial, legal and other requirements, are given in the bidding documents*. A margin of preference for certain goods manufactured domestically shall be applied. Additional details are provided in the Bidding Documents.

7. A complete set of Bidding Documents in *English* may be purchased by interested bidders on the submission of a written Application to the address below and upon payment of a non refundable fee *of Rs.1000/- or US\$ 20*. The method of payment will be *Bankers Draft payable at Kolkata favouring “West Bengal Pollution Control Board”* The Bidding Documents will be sent by *courier services*.

8. Bids must be delivered to the address below at or before 2.00 P.M. *on 07.12. 2011*. Electronic bidding will not be permitted. Late bids will be rejected. All bids must be accompanied by bid security . The filled-in and completed bid document with bid security should be submitted in sealed envelop and cleared marked as “Bid for Supply and Installation of *Laboratory Equipments under CBIPM Project, due on 07.12 .2011 (upto 2.00 P.M)*”. Bids will be opened in the presence of the bidders’ representatives who choose to attend in person or on-line at the address below at *2.30 p.m. on 07.12.2011*.

9. The address(es) referred to above is(are):

Attention: **Project Director & Member Secretary**
Address: **West Bengal Pollution Control Board,”Paribesh Bhavan” 10A,Block-LA,Sector-III,Bidhannagar,**
City: **Kolkata**
Pin Code: **700098**
Country: **India**
Telephone: **+91-33-23351623**
Facsimile number: **+91-33-23352813**
e- mail address: ms@wbpcb.gov.in
Website: <http://www.wbpcb.gov.in>

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1
CBIPMP						
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)				
Quantity □		Central Lab □	1	Regional Lab □	Total □	1
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
	MAKE & MODEL					
	Manufacture	-				
	Model	-				
	Electricity	-				
	Other necessary utility	-				
	Dimension / Weight	-				
1.0	Plasma Generator					
1.1	RF Generator Frequency	Free Running ,40.68 MHz with stability better than 0.1%.				
1.2	Power	Computer adjustable from 800 watts to 1500 watts for 40.68 MHz /				
1.3	Controls	Fully computer controlled with programmable power, start and shutdown of the plasma.				
1.4	Argon	Should have less consumption and should be provided with computer controlled mass flow controllers				
1.5	Plasma mount	Plasma should be dual view with				

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
		Provision to use, Radial view, Axial view or both Radial & Axial view in single run with full dual view capabilities.					
1.6	Re-circulating Chiller	The chiller should be in built or external supplied along with the equipment for RF coil cooling					
2.0	Optical System						
2.1	Wavelength range	170 to 800 nm or better					
2.2	Grating	Echelon grating					
2.3	Focal length	More than 0.3 meter for Echelon grating					
2.4	Entrance slit height	Provision to adjust the viewing height in both axial and radial with Element specific View setting in both views.					
2.5	Optical Resolution	Better than 7 to 9 pm. At 200 nm.					
2.7	UV purge	Nitrogen/argon purge/gas sealed for 165 to 190 nm-please specify the gas consumption during the analytical flow (considering uv elements), standby and shutdown mode.					
2.8	Stabilization	Optics temperature should be internally thermo regulated < $\pm 2^{\circ}\text{C}$					
2.9	Grating density	More than 50 lines/mm for Echelon					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
		grating					
3.0	Detection System						
3.1	Type	Cooled CCD/CID/ solid state					
3.2	Dynamic range	Greater than 6 orders of magnitude					
3.3	No. of pixels	More than 25,000					
3.4	Cooling	Suitable cooling Mechanism for CCD or CID					
3.4	Range	100% of emission spectra from 170 to 800 nm					
3.5	Blooming	The detector shall not be subject to any blinding effect from nearby wavelengths, or excess concentrations. Any excess of an element in one sample should not affect the reading for the next sample due to detector blinding "Blooming". Absence of blooming should be demonstrated by running a 5 g/L Ca 396 nm, and 50 mg/L Al.					
3.6	Gas Control system	The system must have Mass flow control on Nebulizer Gas & variable from 0-2.0 L/Min in increment of 0.01 L/Min. The coolant Gas must be variable & under computer control from 0-20 L/Min in steps of 1.0 L/Min					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
6.0	Computer System and Software						
6.1	Minimum configuration	Pentium core 2 Duo, 2.8 GHz, 4 cache, 2 GB DDR2 800 FSB RAM, Intel 45 chipset Motherboard, 320 GB hard disk, DVD-RW, parallel port, 2 serial ports. Any upgradation of the stated specifications for the computer is acceptable. mouse, Latest windows version, HP Colour Laserjet or better printer, 22" LCD monitor,					
6.2	Software	<ul style="list-style-type: none"> a) Software must be used in latest windows. b) Software must provide preprogrammed conditions for a variety of matrices. c) A “wizard” must be available to completely create and optimize a method. d) Software must provide optimization by element of sensitivity, speed and precision based on user's input. e) Software must provide multi-user security. 					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
		f) Software must provide on-line help at any point in the software. g) There must be databases in the software for matrices, elements run most often, and standards. h) Software must allow for both the export of data and import of sample details in a variety of formats suitable for LIMS and networking. i) Software shall provide a library of over 125,000 emission lines. j) Should offer IQ, OQ, PQ. k) Free software upgrades for three years after installations.					
7.0	Instrument Performance						
7.1	Precision	The in-run precision for a suite of 3 elements Pb, Al, Cd at 1 ppm shall be less than 1.5% RSD.					
7.2	Stability	The ICP spectrometer shall be able start the analysis from cold start in less than 10 Minutes					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
7.3	Precision and stability with dissolved solids	The Instrument should demonstrate long term precession for continuous running of samples.					
7.4	DUAL Detection limits	The instrument shall offer the following minimum limits of detection (LOD) at 3 sigma with a Dual ICP.					
8.0	Consumables Kit	Should contain 33. Torch tubes & Nebuliser for 8.2.1 High Solid 01 nos 8.2.2 Aqueous 8.2.3 HF 8.2.4 Organics. 9 Tubings (24pack for each of the above applications) 10 Argon cylinders with 2 stage regulators 11 Low pressure Nitrogen generator with all accessories and fittings					
9.0	No. of Installations	Give details of the no of installations in India, and particular in West Bengal (mention the contact telephone numbers and address)					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
10.0	Warranty	Refer to Special Conditions of Contract					
11.0	Annual Maintenance Contract	Refer to Special Conditions of Contract					
12.0	Application Notes	Complete technical notes on environmental samples and hazardous waste					
13.0	Standards (NIST traceable)	A set of standard solutions of Ta, Ga, Te, Cd, Fe, Cr, Ni, Si, Ti, Mg, Mn, V, W, Pb, Zn, Nb, Zr, Al, Cu, Co, Sb, Sn, Bi, As, Ge, Y, Ca, Pt, P, Hg and S. of 1000 ug/ml for the system calibration. Multi-element oil standards (mineral oil and vegetable oil) to be supplied along with certifications					
14.0	Training	Training must be imparted in different stages, to the satisfaction of the client. Stage-1: Theoretical training on instrument at Board Office, WBPCB Stage-2: Hands –on-Training for officials of Board at the Board Office, WBPCB for a minimum period of 7 days. Stage-3: Training on operation and maintenance and Quality Control and					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 1	
CBIPMP							
Equipment name □		A) Inductively Coupled Plasma – Atomic Emission Spectrometer (ICP-AES)					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
		<p>Quality Assurance at the Board office for minimum 2 officials of WBPCB.</p> <p>Note: Factory trained engineer has to be arranged for imparting training to WBPCB staff. This factory trained engineer or supplier should be continued with supplying company for at least six years. Please quote separately for all standards, spares and consumables required for 2 years (with detailed break-up) along with Annual Maintenance Contract (AMC).</p>					
Optional Items							
15.0	Auto sampler	Random access auto-sampler for unattended analysis, with auto-shutdown at end of batch analysis for 80 or better samples					
16.0	Hydride Generator	Hydride generator for increase in sensitivity for hydride forming elements.					
17.0	Spares	Any such parts for trouble free function of the system for five years.					

CBIPMP**Appendix - 2****Technical Specifications for EDXRF spectrometer**

General:

The **Energy Dispersive X-ray Fluorescence spectrometer** should be using the **latest principles and equipments for excitation and detection**. It should be capable of analyzing elements from **Na (Z = 11) to U (Z= 92) with high precision and accuracy**. The instrument should have selective secondary excitation options available to facilitate higher sensitivity for the analyte elements. The spectrometer should be versatile enough to **cover a wide range of sample matrices**.

Limits of Detection (LOD):

The LODs should be mentioned in literature and should be **lower than USEPA or WHO standard limits** at desirably low acquisition/present time. Preferable LODs for a few elements based on **NIST SRM 2783** (<http://www.nist.gov/srm>) or equivalent to **Air particulate matters** deposited on membrane filters (Nucleopore: Polyamide) or particle size $\leq 2.5 \mu\text{m}$ and mass loading of approximately $50 \mu\text{g}/\text{cm}^2$ are mentioned below:

(a) Cr $\leq 10.0 \text{ ng}/\text{cm}^2$ (K α); (b) Pb $\leq 12.0 \text{ ng}/\text{cm}^2$ (L α /L β); (c) Sb $\leq 7.0 \text{ ng}/\text{cm}^2$ (K β).

Sample Holding:

Manual or automatic sample changing with options for different sample sizes ranging from 10mm to 50mm diameter and variable thicknesses of thin ($\mu\text{g}/\text{cm}^2$) to thick (g/cm^2). For palletized samples, the holder should be able to accommodate pellets of 25.4mm or 1" \varnothing (diameter), or as per the manufacturers scope. If unavoidable, the spectral impurities/artifacts with their origin should be clearly specified.

Data acquisition medium:

There should be provisions for operation in **Air, Vacuum and Helium** atmosphere to suit various types of samples and element detection range.

Excitation system:

High Current & high energy X-ray tube with Secondary excitation in Cartesian geometry is desirable.

(a) Primary: X-ray tube with anode material producing high energy X-rays for $K\alpha$ excitation of high Z elements like Cd, Sn, Sb, Ba etc. Tube should have long and stable performance with internal cooling facility. A high current tube is preferable to get better sensitivity with secondary exciters. The tube should be able to perform in the low and high current range with very low tolerance.

(b) Secondary: Desirably in Cartesian arrangement with tube, sample and detector, to get reduced bremsstrahlung background and better detection limits. Targets may include secondary exciters and/or Barkla (Al_2O_3 and / CsI) and /or Bragg targets. Provisions for optimized selective excitation to obtain better sensitivity with minimum interference effect should be provided. Additional targets may be quoted as optional.

Detection System:

Solid State/semiconductor detectors with Peltier cooling system high count rate and best energy resolution (FWHM \leq 145 eV at 5.9 keV).

Suitable thin Be window for detection of low energy X-ray (low Z-elements). Semiconductor crystal should have suitable active area and thickness so as to ensure maximum charge collection for high energy K X-rays.

Software:

Software should be capable of sample stage data acquisition, spectral deconvolution, quantitative estimation, record keeping, user defined report preparation and extraction of raw or processed data (including the spectral data) in spread sheets and flat file formats. Intermediate stage results like peak integrals and the spectrum itself should be transferable for use with other software viz. Excel, Origin, AXIL/QXAS code etc. The excitation spectra or the Frequency distribution of the exciting radiation at the sample face should preferably be made available to facilitate better adaptation and user calibration whenever/wherever necessary. The instrument should be precalibrated and calibration standards should be made available; AND/OR the geometry of Source-Secondary-sample-detector has to be provided along with the excitation spectrum so that user can do the calibration independently. The spectrometer should be versatile enough so that the user can also adopt it to various no-routine analytical needs (not to solely depend on the manufacturer to provide calibration standards /software solutions).

Spares and consumables:

At least five years operation of the spectrometer has to be ensured with the provided spares and consumables. Mention unit costs of all the spares and consumables, on which the evaluation will be made. Exact number of items will be decided during awarding the contract.

Utilities:

Vendors should provide a suitable on-line UPS system of appropriate quality and stable output with at least 30 min battery backup.

Warranty:

The entire spectrometer along with the X-ray tube, electronics, touchpad-like operable keys etc. should carry a manufacturer's on-site warranty as specified in the special conditions of contract.

Performance Credentials:

The vendor has to perform analysis of samples provided by us preferably at other installations in india providing with at least the spectra acquired with the details of excitation conditions and also the quantitative data with the local calibration of the installed instrument.

Alternatively, vendors have to reproduce **NIST SRM 2783** (Air Particulate matter of aerodynamic diameter $\leq 2.5\mu\text{m}$ collected on membrane filter) or equivalent sample on their own and provide the EDXRF spectra and results.

After sales service:

After expiry of warranty period schemes for AMC/CMC (Annual/Comprehensive maintenance contract) should be specified. Details of local technical expertise available should also be mentioned. In case of troubleshooting the time for restoration should be given wherever applicable.

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2
CBIPMP						
Equipment Name	B) X-Ray Fluorescence Spectrometer					
Quantity	Central Lab	1	Regional Lab	0	Total	1
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
1. MAKE, MODEL AND CONDITION						
Manufacture	-					
Model	-					
Electricity	-					
Other necessary utility	-					
Dimension / Weight	-					
2. COMPOSITION						
Spectrometer w/accessories	1 set					
Data capture/processing / control system	1 set					
Low pressure nitrogen generator	1 set					
3. SPECIFICATINS						
X-Ray tube						
Type	Side window tube					
Window	Beryllium, less than 400 mm					
Power	Maximum 500W or more					
Anode	Gadolinium					
Optics	Polarizing, 3-D					
Cooling	Internal, water circulation type					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2			
CBIPMP									
Equipment Name		B) X-Ray Fluorescence Spectrometer							
Quantity		Central Lab	1	Regional Lab	0	Total	1		
BOARD'S SPECIFICATION				BIDDER'S RESPONSE					
Detector		Germanium (pl. specify crystal dimensions)							
Window		Be (pl. specify dimensions)							
Energy range		Upto 100 keV							
Energy Resolution		≤ 145 eV at 5.9 keV							
Secondary Targets		At least 8 targets (Pl. specify)							
Data capture / processing / control system									
Software		<p>User friendly operating system. Standardless analysis of unknown samples with fundamental parameters. User defined Calibration curve and standard inclusion.</p> <p>Built-in diagnostics for performance verification.</p> <p>Reporting of data in user defined manner. Standard addition method and analysis package.</p>							
Data acquisition PC									
Type		Intel® Xeon® X5500 series processor with Intel® QuickPath Interconnect (QPI) technology, up to 2.9 GHz and at least 1300							

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2
CBIPMP						
Equipment Name	B) X-Ray Fluorescence Spectrometer					
Quantity □	Central Lab □	1	Regional Lab □	0	Total □	1
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
	MHz front-side bus with Ram (2 GB), HDD (500 GB), CD & DVD RWM, Display (21" LCD), LAN port attached, OS & Office suit preloaded with original media.					
Printer	Laser A4 size, B/W, duplex printer					
4. ACCESSORIES						
Manufacturer's standard accessories	1 set					
Uninterrupted power supply system	Single phase, on-line with maintenance free battery, 30 min back up, Capacity suitable for the entire system.					
Gas cylinders for He and Nitrogen, with cylinder (47 L) and regulator (one for each type.	3 gas cylinders of each type and 4 regulators (two stage) with necessary tubings, openers and connectors.					
Low pressure Nitrogen Generator for 99.99 % pure gas.	1 sets					
Sample tray for pressed pellet	2 sets, with at least 16 sample holders					
Sample tray for 47 mm filter	2 sets, with at least 16 sample					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2			
CBIPMP									
Equipment Name		B) X-Ray Fluorescence Spectrometer							
Quantity		Central Lab	1	Regional Lab	0	Total	1		
BOARD'S SPECIFICATION				BIDDER'S RESPONSE					
		holders							
Liquid analysis attachment (Helium Flushing Device)		1 No.							
Sample tray for liquid samples (Please specify if SS reusable sample cups suffice)		2 sets, with at least 16 sample holders. (At least 5000 disposable liquid holder cus to be provided in case applicable).							
Pelletizer		The application includes huge number of solid samples & hazardous in nature. Appropriate apparatus to be proposed that allows pelletization of such samples in safe manner. Accessories / Disposables of such pelletizers may be required for large volume samples. Capacity 25 ton with suitable dies, operation automatic.							
5. SPARE PARTS & CONSUMABLE									
All accessories (e.g., screw drivers, wrenches etc..)		1000 pc							

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2			
CBIPMP									
Equipment Name		B) X-Ray Fluorescence Spectrometer							
Quantity		Central Lab	1	Regional Lab	0	Total	1		
BOARD'S SPECIFICATION				BIDDER'S RESPONSE					
6. CALIBRATION STANDARD KITS AND SAMPLES (with traceability certificate)									
1. NIST SRM 2783 – Air Particulate for Filter Media, with blank backing			1 set						
2. NIST SRM 2771			1 set						
3. Calibration samples from blank to ~20 mg/sq-cm (1.5 mm thick) (Blank backing Polycarbonate) for metals Ti, Mg, Al, S, Si, K, Ca, Cr, V, Mn, Fe, Ni, Cu, Zn, Sb, Pb, As, Be, Hg, Se, Cd, Be, Te, Tl, Co, Mo, Sn, V, W, Ag			1 set each						
No. of Installations			Give details of the no. of installations in India, and particular in Kolkata (mention the contact telephone numbers and address)						
Warranty			Refer to Special Conditions of Contract						
Annual Maintenance Contract			Refer to Special Conditions of Contract						
Application Notes			Complete technical notes on environmental samples and hazardous waste						
Training			Training must be in different stages, to the satisfaction of the client. Stage-1: Theoretical training on instrument at Board Office, WBPCB						

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 2
CBIPMP						
Equipment Name		B) X-Ray Fluorescence Spectrometer				
Quantity		Central Lab	1	Regional Lab	0	Total
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
	<p>Stage-2: Hands –on-Training for officials of Board at the Board Office, WBPCB for a minimum period of 7 days.</p> <p>Stage-3: Training on operation and maintenance and Quality Control and Quality Assurance at the Board's office of WBPCB.</p> <p>Note: Factory trained engineer has to be arranged for giving training to WBPCB staff. This factory trained engineer or supplier should be continued with supplying company for at least six years. Please quote separately for all standards, spares and consumables required for 2 years (with detailed break-up) along with Annual Maintenance Contract (AMC).</p>					

Solid Waste Extraction Assembly

3.
3.This is an accelerated solvent extraction system with integrated solvent controller, carousal mounting facility enabling unattended operation and sequential capability of extracting more than 20 solid or semisolid samples with typical extraction times of 12-15 min. using common solvents at elevated temperature and pressure for faster extraction process

The equipment should have approval by US EPA. For EPA method 3545 & 3545A

The oven should be able to accept any sizes of 1,5, 10, 22, 34, more than 64 & more than 99 ml cells with temperature control of ambient to 200 deg. C and Pressure delivery upto 1500 psi.

.....1.a.i.1.1.1.1 Collection bottles of 250 ml and 60 mL are to be provided along with Collection bottle tray capable of holding more than 10 such bottles or vials.

(b) **The System should have following in built functions**

- l) The extracts should be automatically filtered for direct injection
- m) It should be faster with minimum solvent usage facility
- n) Convenient multiple method & schedule storage for automatic operation
- o) Sensors for temperature, pressure or solvent leaks should be there to alert the operator to a problem. If necessary audible alarm or system shut down to be provided.

Standard accessories like caps, fittings, vials should be provided with the system.

Detailed specifications follow.

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 3	
CBIPMP							
Code Number							
Equipment Name		C) Solid Waste Extraction Assembly					
Quantity		Central Lab	1	Regional Lab	0	Total	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
General Description: The system is for extraction of solvent soluble organic/inorganic contaminants in solids & semi-solid matrices. The system employs heating up of the sample/extractant mixture in a controlled manner and performs repetitive extraction and cleaning up in tandem. The final cleaned extract, in extractant, is delivered in a pre-identified bottle. The entire process is performed in closed chamber so that no lab-air contamination is there.							
1. MAKE, MODEL AND CONDITION							
Manufacture		-					
Model		-					
Electricity		-					
Other necessary utility		-					
Dimension / Weight		-					
2. COMPOSITION							
Main system with pump and control module		1 set					
Low pressure nitrogen generator		1 set					
3. SPECIFICATIONS							
Extraction vials/cells		Various sizes (pl. specify) from					

TECHNICAL SPECIFICATION OF EQUIPMENT					Appendix - 3		
CBIPMP							
Code Number							
Equipment Name		C) Solid Waste Extraction Assembly					
Quantity		Central Lab	1	Regional Lab	0	Total	1
		<5 ml to 100 ml, of SS or solvent resistant glass. All fittings of same material or PTFE					
Oven		Heats up the extraction assembly in a controlled manner upto at least 180 deg-C					
Process		The system should perform extraction individually and place the extracted solution in pre-defined bottle after cleaning up.					
Pump		Fluid delivery pressure pump with at least 1200 psi max pressure.					
Pressure		Sensing and control automatic					
Fluid control		Flow and levels sensed by the system during extraction / cleanup employing spectroscopic signature of the fluid (e.g., IR)					
Fluid type		Any organic fluid or aqueous based solution					
4. ACCESSORIES							
Manufacturer's standard accessories		1 set					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 3
CBIPMP						
Code Number						
Equipment Name	C) Solid Waste Extraction Assembly					
Quantity	Central Lab	1	Regional Lab	0	Total	1
Uninterrupted power supply system	Single phase, on-line with maintenance free battery, 30 min back up, Capacity suitable for the entire system.					
Low pressure Nitrogen Generator	1 sets					
Extraction cells (the price offer should provide unit price and numbers will be selected later)	100 ml – 4 nos 34 ml – 4 nos 10 ml – 12 nos 5 ml – 4 nos					
Extraction cell tray (as suits the extraction cells)	<ul style="list-style-type: none"> • 24 Cell positions. • 2 rinse positions. • Automatic home position sensing. • Multiple extraction per cell. 					
Collection vial tray (as suits the extraction cells)	<ul style="list-style-type: none"> • 26 position tray insert for 60 ml vials • 19 position tray insert for 250 ml bottles • 2 bottle position for rinse/waste collection tray compatible with 250ml bottles. 					
Collection bottle (as suits the extraction cells)	<ul style="list-style-type: none"> • 60ml and 250ml VOC Certified. • Bottle lids with solvent resistant septa. (TFE coated on solvent 					

TECHNICAL SPECIFICATION OF EQUIPMENT					Appendix - 3	
CBIPMP						
Code Number						
Equipment Name		C) Solid Waste Extraction Assembly				
Quantity		Central Lab	1	Regional Lab	0	Total
		side)				
5. SPARE PARTS & CONSUMABLE						
All accessories (e.g., screw drivers, wrenches etc..)		1 set				
Extraction Cells		100 ml – 2 nos 34 ml – 2 nos 10 ml – 2 nos 5 ml – 2 nos				
Collection bottle/vials		250 ml. - 50 nos 60 ml. - 150 nos				
Necessary consumables (Binders, fillers, o-rings, etc.. for extraction of 100 samples per month)		Sufficient quantity for 5 years				
Clean up matrix and chemicals (Activated alumina, Florisil, Impregnated Silica Gel etc..)		For 5 years of operation				
Filter papers and syringe filters (all assembly)		5 sets of syringe filters and filter papers for 5 years operation				
No. of Installations	Give details of the no. of installations in India, and particular in Kolkata (mention the contact telephone					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 3	
CBIPMP							
Code Number							
Equipment Name		C) Solid Waste Extraction Assembly					
Quantity		Central Lab	1	Regional Lab	0	Total	1
		numbers and address)					
Warranty	Refer to Special Conditions of Contract						
Annual Maintenance Contract	Refer to Special Conditions of Contract						
Application Notes	Complete technical notes on environmental samples and hazardous waste						
Training	Training must be in different stages, to the satisfaction of the client. Stage-1: Theoretical training on instrument at Board Office, WBPCB. Stage-2: Hands –on-Training for officials of Board at the Board Office, WBPCB.						
Spares	Any such parts for trouble free function of the system for five years						

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 4	
CBIPMP							
Equipment name □	D) Bomb Calorimeter						
Quantity □	Central Lab □	1	Regional Lab □		Total □	1	
BOARD'S SPECIFICATION			BIDDER'S RESPONSE				
1. MAKER MODEL AND CONDITION							
Manufacture	-						
Model	-						
Electricity	-						
Other necessary utility	-						
Dimension / Weight	-						
2. COMPOSITION							
Main unit	1 set						
Apparatus for filling up oxygen	1 set						
O2 gas cylinder with regulator	1 set						
Electronic balance	1 set						
3. SPECIFICATIONS							
Type / Method	Compensated Isoperibol / Isothermal						
Instrument	Microprocessor controlled calorimeter for measuring calorific value of solid waste, hazardous waste and other samples.						
Measurement Range	Upto 8000 Kcal/KG for 1 gram of						

TECHNICAL SPECIFICATION OF EQUIPMENT CBIPMP						Appendix - 4
Equipment name □	D) Bomb Calorimeter					
Quantity □	Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
	sample with a provision to extend upto 12,000Kcal/KG for 1gm of sample without reducing the sample size.					
Precision	0.2 % RSD or better					
Resolution	0.1 Cal/gm					
Analysis Mode	Equilibrium mode / Dynamic mode or any other mode					
Temperature Measuring Resolution	0.01° C					
Display	Color touch screen with graphical user interface					
Correction	Spiking, Ash/ Nitrogen or Acid , Fuse wire , Sulphur and Hydrogen.					
Memory Capacity	Minimum 1,000 tests results.					
Computer / Printer/ Balance	Suitable computer, printer and balance are required to be supplied with required interfaces along with the system.					
Sample Crucible Capacity	0.5 gm – 1.5 gm .					
Power requirement	230 VAC +/- 10 %, 50 hz as per Indian condition.					
Processing Capacity	Maximum 15 – 20 Minutes per					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 4	
CBIPMP							
Equipment name	D) Bomb Calorimeter						
Quantity	Central Lab	1	Regional Lab		Total	1	
BOARD'S SPECIFICATION			BIDDER'S RESPONSE				
	sample.						
Oxygen bomb	The oxygen combustion bomb should be made of special stabilized stainless steel to resist the mixed nitric acid and sulphuric acid produced in combustion . It should have more than 300 ml capacity with standing a hydrostatic pressure of 3000 psi max and working pressure of about 1500 psi.						
Other Requirements	SS Bomb with test certificate, calorimeter vessle with bomb support, water jacket with calorimeter vessle support with proper insulation, combined lid for water jacket and calorimeter vessle, connecting wires (electrical), connecting tubes for filling oxygen in the bomb, spanner set for oxygen tube connection, pressure gauge on stand and bomb lid stand, safety device, electronic firing unit and degitel beckmann thermometer						

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 4	
CBIPMP							
Equipment name	D) Bomb Calorimeter						
Quantity	Central Lab	1	Regional Lab		Total	1	
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
		<p>(along with calibration certificate), ignition wire – 50 meter, cotton reel – 50 meter, bomb O-ring, valve body O-ring, stirrer belt, schrader valve, benzoic acid of known calorific value (along with calibration certificate), pellet press, valve key, gas releasing pin, gas releasing valve, oxygen control valve, crucible (quartz and Stainless Steel), bursting discs for safety device, stirrer motor, hook for lifting bomb etc. Provision for variety of bombs for measurement of different ranges (25 K Cal/Kg to 12,000 Kcal /Kg) with the same system . The Variety of Bomb can be simplify plug in / Plug out inside the system.</p>					
		Should be supplied along with two numbers of 99.99 % Oxygen Gas Cylinder with two stage regulator.					

TECHNICAL SPECIFICATION OF EQUIPMENT CBIPMP						Appendix - 4
Equipment name □	D) Bomb Calorimeter					
Quantity □	Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION			BIDDER'S RESPONSE			
Sample volume	Approx. 1 g					
Oxygen pressure into bomb	Approx. 30 to 40 kg/cm ²					
Stirring speed	Approx. 800 rpm					
Electronic balance						
Weighting capacity	120 g or more					
Readability	Less than 0.1 g					
Pan size	Approx. 200x230 mm					
4. ACCESSORIES						
Manufacturer's standard accessories	1 set					
Beckmann's thermometer	1 set					
Apparatus for filling up Oxygen	1 set					
O ₂ gas cylinder (99.99%) with 2 stage regulator regulator (47L)	3 sets					
5. SPARE PARTS & CONSUMABLE						
Apparatus for filling up oxygen	1 set					
Benzoic acid (25g/pack)	2 packs					
Combustion crucible	3 pcs					

TECHNICAL SPECIFICATION OF EQUIPMENT						Appendix - 4	
CBIPMP							
Equipment name □		D) Bomb Calorimeter					
Quantity □		Central Lab □	1	Regional Lab □		Total □	1
BOARD'S SPECIFICATION				BIDDER'S RESPONSE			
SS304							
Ignition wires 100 pcs/set		6 sets					
Wrapping papers		600 sheets					
Fibre packing for oxygen lead pipe		3000 pcs					
No. of Installations	Give details of the no. of installations in India, and particular in Kolkata (mention the contact telephone numbers and address)						
Warranty	Refer to Special Conditions of Contract						
Annual Maintenance Contract	Refer to Special Conditions of Contract						
Application Notes	Complete technical notes on environmental samples and hazardous waste						
Training	Training must be in different stages, to the satisfaction of the client. Stage-1: Theoretical training on instrument at Board Office, WBPCB. Stage-2: Hands –on-Training for officials of Board at the Board Office, WBPCB.						
Spares	Any such parts for trouble free function of the system for five years						

