



ಭಾರತ್ ಹೆವಿ ಎಲೆಕ್ಟ್ರಿಕಲ್ಸ್ ಲಿಮಿಟೆಡ್
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
ELECTRONICS DIVISION

P. B. No 2606, Mysuru Road, Bengaluru - 560 026.
An ISO 9001, ISO 14001, ISO 45001 & ISO 27001 Company

Phone : 26998402
e-mail : hse@bhel.in

Tender Document for the Work of:

Stack Emission and Ambient Air Quality Monitoring

at BHEL, Electronics Division, Mysuru Road
Bengaluru-560 026 &
BHEL, Electronics Systems Division, E-City
Bengaluru-560100

This Tender Document contains 22 Pages



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NOTICE INVITING TENDER

1. Tender Reference : BHEL-EDN/HSE/Air quality & emission analysis /2025-27
Dated: 14.07.2025
2. Name of the work : Stack Emission and Ambient Air Quality Monitoring
3. Duration of contract : Two years (August 2025 to August 2027)
4. Earnest money deposit : Nil
5. Last date and time for the receipt of completed tender : Before 4.00 PM on 24.07.2025
6. Date and time for tender opening : At 1.30 PM on 25.07.2025
(Technical Offer)

This tender document contains 22 pages including the following.

01. Instructions to tenderers
02. Scope of Work and Terms & Conditions
03. Annexure – I (Questionnaire)
04. Annexure – II Industry Profile
05. Annexure – III List of stacks with parameters
06. Annexure – IV Format for reporting stack emission analysis
07. Annexure – V Format for reporting ambient air quality
08. Annexure – VI Details of number of samples

Note: The tenderer shall return the duly filled in tender document after affixing signature on all pages.



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INSTRUCTIONS TO TENDERERS

Name of work: Stack Emission and Ambient Air Quality Monitoring

1. Tenders for the above mentioned work are hereby invited from Contractors experienced in works of similar kind and magnitude and having the valid MoEF accreditation and approved by National Accreditation Board for Testing and Calibration Laboratories (NABL)
2. Tenders should be floated through the government Eprocurement website of BHEL (<https://eprocurebhel.co.in/nicgep/app>)
3. The tenderer should have a local facility for collection and analysis and the local address of the Contractor, the name of the person to whom all the correspondence is to be addressed should be indicated with telephone number (both office and residence), E-mail address and Mobile Number.
4. All entries in the tender documents should be in one ink. Erasures and over writing are not permitted. All cancellations and insertions should be duly signed by the tenderer concerned with proper indication of the name, designation and address of the person signing.
5. Tenderers shall fill in all the required particulars in the blank spaces provided for this purpose in the tender documents and also sign each and every page of the tender document including the drawings attached thereto before submitting tender.
6. Unit rate should be quoted in figures as well as in words in Indian Currency only, i.e. Rupees and Paise with reference to the work. In case the rate quoted in figures differ from those quoted in words, the higher of the rates will be taken as the tendered rate and shall be binding on the tenderers.
7. The rates quoted in the tender shall remain valid for a period of 'THREE MONTHS' from the date of opening of tender.
8. Tenderer shall not reduce their quoted rates, once the tenderer has submitted his quotation and during execution of the contract in case his tender is accepted.
9. Quantity shown in the attached schedule is only approximate and are liable to variation.
10. Before tendering, the tenderers are advised to inspect the site of work and its environments and be well acquainted with the actual working and other prevailing conditions, position of material and labour. They should be well versed with BHEL General Conditions of Contract, Instructions to tenderers, specifications and all other documents which form part of the Tender Document. The tenderers shall specially note that it is tenderer's responsibility to provide any item which is not specifically mentioned in the specification, but which is necessary to complete the work.



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11. Should a tenderer find discrepancies or omissions in the Specification attached to the tender documents or should be in doubt as to their meaning he should at once address to the authority inviting the tender for clarifications.

Every endeavor is made to avoid any error which can materially affect the basis of the tender but the successful tenderer shall take upon himself to provide for the risk of any error which may be subsequently discovered and shall make no subsequent claim on account thereof.

12. In the event of tender being submitted by a firm the tender must be signed separately and legibly by each partner or member of the firm or in their absence, by the person holding the power of Attorney on behalf of the firm concerned. In the latter case, a copy of the power of attorney duly attested by a Gazetted Officer must accompany the tender.
13. The BHARAT HEAVY ELECTRICALS LIMITED reserve the right to reject any or all the tenders received or accept any tender or part thereof without assigning any reason thereof. In the case of acceptance of a part of tender, the time for completion may also be reduced to the extent considered appropriate by the accepting authority.
14. Conditional and unsigned tenders, tenders containing absurd rates and amounts, tenders which are incomplete or otherwise considered defective, tenders which are not in accordance with the tender conditions laid down by the Accepting Officer and tenders not submitted in the prescribed forms are liable to be rejected.
15. The Contractor's responsibility under this contract shall commence from the date of receipt of the order or acceptance of his tender.
16. If a tenderer expires after the submission of his tender or after the acceptance of his tender, BHEL may at their discretion cancel such tender.
17. If a partner of the firm expires after the submission of the tender, after the acceptance of the tender, BHEL may cancel such tender at their discretion unless the firm retains its character/s.
18. BHARAT HEAVY ELECTRICALS LIMITED will not be bound by any power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. They may however, recognize such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.
19. If the tenderer deliberately gives wrong information in his tender, BHEL reserve the right to reject such tender at any stage. Further the tenderer will be liable for any damage caused.
20. Words imparting the singular number shall also be deemed to include the plural number and vice-versa where the context so requires.

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21. The General and Special Conditions of Contract are complementary to each other and where they are in conflict, the special condition shall prevail.
22. The Contractor shall take into account all the materials needed for storage, loading, etc., In quoting their rates, the Contractors are advised to take into account the cost of the above materials.
23. Should a tenderer or a contractor on the list of approved contractors has a relative or in the case of firm or Company of Contractors any of its shareholder's relative is employed in a Gazetted Capacity in the Electronics Division of Bharat Heavy Electricals Limited, Bengaluru-26 i.e the authority inviting tenders, shall be informed of this fact at the time of submission of the tender, failing which tender may be disqualified or if such fact subsequently come to light, the relevant provisions of the General Conditions of Contract will apply.
24. These 'INSTRUCTIONS TO TENDERERS' & 'GENERAL CONDITIONS OF CONTRACT OF BHEL' shall be deemed to form an integral part of the contract agreement for the work to be entered into. In cases of variation between the two in any matter, the conditions in the 'THE INSTRUCTIONS TO TENDERERS' shall prevail. Extracts of some of the important clauses of BHEL G.C.C are enclosed (Annexure B & C containing extracts of clauses 2.8 and 2.18 of BHEL GCC). The contractor has to obtain, at his cost, a copy of the BHEL GCC, scrutinize the same, and when submitting his tender, indicate his acceptance of BHEL GCC in the proforma enclosed as Annexure B & C.
25. BHEL-Electronics Division is an ISO 14001 & 45001 certified company and the contractor shall be liable to oblige with the clauses of these standards during the execution of the contract. The contractor and his employees shall also follow the safety code given as Annexure D and also the guidelines of the BHEL- HSE policy enclosed as Annexure E.
26. All operations to be carried out by the Contractor during the execution of the contract like storage, loading etc., shall be done after getting approval from our Engineer-in-charge.
27. The Contractor shall get himself registered with the PF. Authorities as an independent Employer, and should have their own code number. They should comply with the provision of Employees Provident Fund and Miscellaneous Provisions Act 1952 and rules, regulations and other orders issued there under
28. The Contractor should get himself registered with the E.S.I. Authorities as an independent Employer, and should have their own code number. They should comply with ESI Act, rules, regulations and other orders issued there under
29. If applicable, the Contractor shall apply and obtain license under Contract labour (R&A) Act 1970 and comply the relevant provisions of this Act in respect of the labour employed by him for executing this contract. The Contractor shall furnish necessary returns to the authority.
30. If applicable, the Contractor shall insure all his labourers and equipment / materials. Any claim by his employees for damages shall be settled by the contractor even if action is against BHEL or to

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reimburse the legal expenses incurred by BHEL. The contractor shall take care of safety of the building and equipment at the working area. In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry

31. Contractor shall produce necessary records, documents and explanation whenever he is called upon to by any Government agencies like ESI, PF, VIGILANCE etc.

32. **TERMS OF PAYMENT:**

The payment will be made on the basis of Quantum of work done, based on Unit rate and within 30 days from the date of submission of bills, duly certified by BHEL Engineer-In-charge. Bills should be submitted along with all necessary documents, challans & ECR copies for ESI /PF and returns etc. as applicable under contractor's statutory liability and this contract.

The Payment will be made to the Contractor on the basis of work carried out, keeping in view the Unit of measurement. In case, the same persons deployed by the contractor, are permitted by him to continue to work beyond normal working hours, for any reasons whatsoever, contractor in such cases shall pay them the wage rates applicable under the Factories Act at contractors cost. In other words, no overtime (OT) payment will be made by BHEL, as the payment is on "Unit Rate Basis".

33. **SECURITY DEPOSIT:**

Upon acceptance of the tender, the successful tenderer shall within the time specified in the letter of intent deposit with the Bharat Heavy Electricals Ltd., either in cash or in the form of Government Securities endorsed in favour of the Bharat Heavy Electricals Ltd., such further sum along with the Earnest Money paid by the tenderer to make up the full security deposit as referred to in clause 16 (1) of BHEL GCC.

Alternatively, the requisite amount (50 % amount) to make up the full security Deposit may also be deducted from each running bill in respect of the particular contract concerned at 10 % (ten percent) of the value of the work done by the Contractor as billed till such deductions along with the Earnest Money already deposited by him shall make up the full security deposit as per clause 16 (1) above.

For extra items of work and deviated quantities, security deposit will be recovered at 10 % of the value of deviated amount. The security deposit will be released within 30 days of submission of the last bill.

34. **INSPECTION OF MATERIALS / WORK BY BHEL:**

BHEL officers connected with the contract shall have the power at any time to inspect and examine any stores or materials intended to be used in or on the work, whether on the site or at any factory or workshop or other place the same are laying and the contractor shall give necessary facilities for such inspection and examination.

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35. GOODS AND SERVICE TAXES(GST):

BHEL EDN GSTIN number is 29AAACB4146P1ZB. All invoices to contain BHEL GSTIN No. The Bidder shall mention Bidder's GSTIN number in all quotations and invoices submitted. Invoice submitted should be in the format as specified under GST Laws viz.all details as mentioned in Invoice Rules like GSTN registration number, invoice number, quantity, rate, value, taxes with nomenclature-CGST, SGST, UGST, IGST mentioned separately. Invoice should be submitted in original for buyer plus duplicate for credit availment. Payment of GST to Bidder will be made only if it is matching with data uploaded by the Bidder.

In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount will be recoverable from vendor along with interest levied/leviable on BHEL. In case vendor delays declaring such invoice in his return and GST credit availed by BHEL is denied or reversed subsequently as per GST law, GST amount paid by BHEL towards such ITC reversal as per GST law will be recoverable from vendor/contractor along with interest levied/leviable on BHEL.

36. EXTRA ITEMS

No extra items of work shall be carried out by the contractor other than those authorized to do so in writing by the Engineer. For any such items of work executed as per instructions of Engineer, the rates will be fixed on the basis indicated under BHEL GCC

37. INTERRUPTION TO WORKS:

In quoting the rates / prices the contractor should take in to account the fact that due to the site conditions or other reasons, interruptions are likely to be encountered in a work of this nature and magnitude. No claims for such interruption will be entertained on any account.

ANNEXURE: 'A'

GENERAL CONDITIONS OF CONTRACT

It is hereby agreed by me / us that the BHEL General Conditions of Contract including subsequent amendments / additions / deletions to clauses if any, and conditions pertaining to the settlement of disputes by Arbitration form an integral part of the tender documents and that the tender submitted by me/us is subject to the aforesaid BHEL General Conditions of Contract which has been read and accepted by me / us.

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ANNEXURE 'B'

EXTRACT OF CLAUSE 2.8 - RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF LOCAL LAWS, EMPLOYMENT OF WORKERS ETC.

The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.

The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Maternity act, Regulations etc. such as contract labour(R&A) Act 1970, Minimum wage Act 19748, Payment of wages Act 1936,ESI Act 1948, EPF Act 1952, Employees' compensation Act 1923, The Karnataka Factories Rules 1969, Child labour Prohibition act 1986, Prevention of sexual harassment at work place Act 2013, The company's instructions as issued from time to time in regard to working hours, wages, leaves, holidays etc. for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also give to the local Governing Body, Police and other relevant Authorities all such notices as may be required by the Law

The contractor shall obtain independent License under the Contract Labour (Regulations and Abolition Act) as required from the concerned Authorities based on the certificate (FormV) issued by the Principal Employer/Customer

The contractor shall pay all taxes, fees, license charges, deposits, duties, tolls, royalties, commission or other charges which may be levied on account of his operations in executing the contract.

Contractor shall be responsible for provision of Health and Sanitary arrangements, Safety precautions etc. as may be required for safe and satisfactory execution of contract.

The contractor shall be responsible for the proper behavior and observance of all regulations by the staff employed by him. The contractor shall ensure that no damage is caused to any person/property of other parties working at site. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.

Any delay in completion of works/or non-achievement of periodical targets due to the reasons attributable to the contractor, the same may have to be compensated by the contractor either by increasing manpower and resources or by working extra hours and/or by working more than one shift. All these are to be carried out by the contractor at no extra cost. The contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.

All safety rules and codes applied by the Client/BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain protection necessary for the purpose.

The contractor will be directly responsible for payment of wages to his workmen on specified date of respective month declared as per applicable Labour Act. In case of any class of work for which there is no

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such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.

The contractor shall not stop the work or abandon the site for whatsoever reason of dispute, excepting force majeure conditions. All such problems/disputes shall be separately discussed and settled without affecting the progress of work. Such stoppage or abandonment shall be treated as breach of contract and dealt with accordingly

The contractor shall execute the work in the most substantial and workman like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract.

INSPECTION OF THE WORK: BHEL Officers concerned with the Contract shall have power at any time to inspect and examine any part of the work and the contractor shall give such facilities as may be required to given for such inspection and examination.

In case the contractor is required to undertake any work outside the scope of this contract, the rates payable shall be those mutually agreed upon if the item rates are not mentioned in existing contract

ANNEXURE - 'C'

EXTRACT OF CLAUSE 2.18 OF GENERAL CONDITIONS OF CONTRACT

ARBITRATION:

In case amicable settlement is not reached in the event of any dispute or difference arising out of the execution of the Contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the Contractor in any manner touching upon the Contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by BHEL/In charge. The award of the Arbitrator shall be binding upon the parties to the dispute Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or reenactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of the arbitration shall be the place from which the contract is issued or such other place as the Arbitrator at his discretion may determine

In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable: In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs,

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Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.

The cost of arbitration shall be borne equally by the parties.

Work under the contract shall be continued during the arbitration proceedings

ANNEXURE 'D'

SAFETY CODE

RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT

1. The contractor shall have full regard to safety of all persons deployed by him at the site. Keep the site and the works in orderly state appropriate to avoidance of danger to such persons. The contractor shall be responsible for any consequence arising out of execution of assigned contract.
2. The contractor shall take all reasonable steps to protect the environment on and off the site to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of execution of assigned contract.
3. The contractor is expected to follow a work planning process that is acceptable to the organization. The work planning must be conducted and documented prior to the start of work. Following steps to be followed and documented in the form of Job hazard Analysis.
 - a. Define the scope of work.
 - b. Analyze hazard for each activity, in a step by step manner.
 - c. Develop and Implement Hazard controls and regulatory compliance.
 - d. Perform the work and monitor the effectiveness of the hazard control.
 - e. Provide feedback to improve the process.
4. The contractor shall provide the following Personal Protective Equipment (PPE) as appropriate for the work as per relevant IS Standard while executing the contract.
 - a. Hard Hats (Safety Helmet)
 - b. A Pair of Gum Boots
 - c. A pair of Safety Shoes with Steel toe
 - d. Goggles (safety Glasses)
 - e. A Pair of Aprons (Cotton & Chemical Resistant)
 - f. Chemical Fume Respirators
 - g. Dust respirators
 - h. Ear plug/ Ear muff



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5. All chemicals to be used at the site facility must be approved by the contracting organization and Material Safety Data Sheet must be maintained by the contractor.
6. In the event of any spillage, try is to recover as much material as possible before it enters drainage system and to take all possible measures to prevent spilled materials from running off the site.
7. The contractor shall ensure not to mix chemicals without proper supervision.
8. The Contractor shall explain all the hazards and risks associated with the operation to contract workmen prior to the start of work.
9. The Contactor shall screen all workmen for health and competence requirement before engaging for the job and also periodically.
10. The Contactor Shall report all incidents (Fatal/Major/Minor/Near Miss) to the Site engineer in charge-BHEL.
11. The Contactor shall ensure full co-operation during all HSE audits.
12. The Contractor shall adhere to the instructions laid down in Operation Control Procedures (OCPs) available with the contracting organization.
13. The Contractor shall ensure that adequate illumination is arranged during night work.
14. The contractor shall not interfere with or disturb electric fuses, circuit breakers, wiring and other electrical equipment's belonging to BHEL under any circumstances whatsoever, unless specially permitted in writing by BHEL to handle such fuses, circuit breakers, wiring or electrical equipment's.
15. The contractor shall ensure that there is no wastage of electricity, water, compressed air or any other natural resources while performing work on site of contracting agency
16. The contractor and his workmen shall avoid the use of polythene bags, thermocol and other non-biodegradable substances to the extent practically feasible.



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ANNEXURE 'E'




Health, Safety & Environment Policy

BHEL is committed to ensure occupational health & safety of its employees and other people working for the organisation and minimising the environmental footprints of its activities, products and services through active leadership and ensuring availability of required resources. Further, we commit to continually improve our Environmental, Social and Governance (ESG) performance by:

- Strengthening safety culture with an objective to attain Zero Harm,
- Taking up activities for protection of the environment, including prevention of pollution, protection of biodiversity & ecosystems and climate change mitigation & adaptation,
- Taking steps for attaining Net Zero emissions (Scope 1 and Scope 2) by 2047,
- Conserving resources and adopting sustainable waste management practices based on Reduce / Recycle / Reuse approach,
- Managing Environmental impacts and Occupational Health & Safety risks through elimination / substitution / reduction / control approach,
- Ensuring compliance with applicable legislations, regulations and BHEL Management Systems,
- Incorporating appropriate Occupational Health, Safety and Environment criteria into business decisions, conceptualisation and design of products, selection of plants, technologies and services, procurements and in outsourced processes,
- Ensuring consultation and participation of workers and other stakeholders for improvements in the HSE Management System (HSEMS) and reviewing periodically this policy and HSEMS to ensure their relevance, appropriateness and effectiveness,
- Imparting appropriate structured training to persons engaged at our workplaces and promoting awareness amongst customers, contractors and suppliers on HSE issues,
- Communicating this policy within BHEL and making it available to interested parties.

(This policy bears the approval of Chairman & Managing Director, BHEL)



Bharat Heavy Electricals Limited



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BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

ELECTRONICS DIVISION

P. B. No 2606, Mysuru Road, Bengaluru - 560 026.

An ISO 9001, ISO 14001, ISO 45001 & ISO 27001 Company

Phone : 26998402

e-mail : hse@bhel.in

SCOPE OF WORK and TERMS & CONDITIONS

Collection and analysis of Stack emission has to be carried out once in a month in Electronics division (Mysuru Road) and once in a quarter in Electronics systems division (Electronics city) for the stacks and the respective parameters mentioned in Annexure III and the reports shall be submitted as per Annexure – IV. The ambient air quality monitoring has to be done for 24 hours. (continuous monitoring) as per Annexure – V. Details of number of samples, location and frequency is mentioned in Annexure VI. However, the frequency of monitoring and number of chimneys may be increased or reduced according to the directions from Karnataka State Pollution Control Board, on the same rates, terms and conditions.

1. The Contractor should possess a full-fledged laboratory with all the equipment (calibrated) required for analysis to be eligible for submission of quotation for the said work. BHEL representatives may visit the tenderer's Laboratory, if required. The equipment shall be shown to us during our visit before finalization of the work. All the equipment / Instruments should be maintained in good condition.
2. The Parameters to be analyzed, reporting format, No. of samples, location, frequency are given in Annexure III to Annexure VI. The reports should be given in the respective format as per the annexure. The collection of samples shall be done by you with proper equipment. The collected samples are to be analyzed in your laboratory as per the procedures prescribed in relevant IS / approved protocol by the Karnataka State Pollution Control Board.
3. The Contractor shall furnish periodical calibration certificates of all the equipment / instruments used in the said work.
4. The Contractor shall start the work every month after advance information of one day. Also, you should be in a position to carry out the additional work whenever we want, even with a short notice of time.
5. The tenderer's representative has to report to the supervisor / executive in-charge before collecting the samples from the assigned points.



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6. The thimbles, micro fiber filters and reagents are to be shown to us every time before collection of samples. Other tools & tackles required for collection of samples are to be brought by the tenderer's representative. The collected samples must be clearly labeled for sample location, sample details, sample date, time etc. The analysis report containing all the details should be submitted to BHEL within 7 days from the date of collection of samples.
7. BHEL officers connected with the contract shall have the power to inspect and examine any stores or materials intended to be used in or on the work, whether on the site or at the tenderer's laboratory, as and when required. The tenderer shall give necessary facilities for such inspection / examination / to witness the test.
8. The tenderers may visit at BHEL – EDN, Bengaluru – 26 and BHEL-ESD, Bengaluru -100 before submitting their offer.
9. The financial offer should be submitted as per the Price Schedule Format, while submitting offer through BHEL-E-procurement website and the rate shall include all the Statutory Charges, transportation charges, sample collection charges etc.



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ANNEXURE – I

Sub: - Contract for Stack emission and Ambient Air Quality Monitoring at BHEL, Electronics Division (560026) & BHEL Electronics Systems Division (560100)

Questionnaire to be answered by the tenderer by writing "YES" OR "NO" in the suitable boxes. These details are essential to accept the Technical offer. If the tenderer does not give details as required, the offer will not be considered.

SL. No.	Description	YES	NO
01	Whether the tenderer has understood the scope of work. (If the answer is "NO", or there is any clarification required, the same may be got cleared from the Executive in charge, before submitting the offer)		
02	Whether the tenderer has the valid MoEF Authorisation and the copy of the same is enclosed along with scope		
03	Whether the tenderer has the valid NABL accreditation and the copy of the same is enclosed along with scope		
04	Whether the tenderer agrees to supply necessary Safety appliances during the execution of work.		
05	Whether the tenderer agrees to give validity of offer for 3 months from the date of opening of technical bid.		
06	Whether the tenderer agrees for the payment terms mentioned in the tender.		
07	Whether the tenderer has signed all the pages of the tender document and submitted along with the Technical offer		
08	Whether the tenderer agrees to inspect the facility, if desired by BHEL, before finalizing the offer and during the execution of work.		
09	Whether the tenderer has indicated the address of their local office in Bengaluru along with the phone no. The offer of the tenderer who does not have local office will be rejected.		
10	Whether the tenderer has agreed to all Terms & Conditions given in the tender. (If the Answer is "NO"/ or any deviation, the same may be mentioned in separate sheet.		
11	Whether the tenderer has filled their offer as per the Price Schedule Format and submitted under commercial offer.		

Note:

1. If any of the question is not applicable, please mention as "Not Applicable".
2. If there is any deviation, please mention the same separately.

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Annexure – II
Industry Profile

1. Name of the Contractor

2. Residential address

.....

.....

Telephone Number

3. (i) Name of the Firm with
Address

.....

.....

E-Mail address if any

Telephone Number

PAN

GST NO.

(ii) Whether proprietary /
Partnership Firm/Company: Proprietary/Partnership/Company (please tick)
(Enclose Firm Registration Certificate Copy).

4. Name of the contact person for
Contractor

Telephone Number

Place:

Signature:

Date:

Name:

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ANNEXURE – III

i) DETAILS OF THE CHIMNEYS AND THE PARAMETERS FOR STACK EMISSION MONITORING at Electronics division (EDN – Mysuru road)

Sl No.	Chimney No. /Bldg.	Chimney attached to	Constituents to be controlled	Tolerance limit mg/NM3	Frequency of monitoring
01	01/SC & PV, B16	Process emission from fume cupboards of semiconductor (Lacquer curing + Metal Segment Etching)	Acid Mist PM	50 150	Once in a Month
02	02/SC & PV, B16	Process emission from fume cupboards of semiconductor (Lacquer Preparation + Evaporation Preparation + Etching + 3 stage Ultrasonic cleaning)	Acid Mist PM	50 150	Once in a Month
03	03/SC & PV, B16	Process emission from fume cupboards of semiconductor (Rotary pumps of evaporation Unit – 2 Nos + Gold Diffusion)	Acid Mist PM	50 150	Once in a Month
04	04/SC & PV, B16	Process emission from fume cupboards of semiconductor (HVDC Assembly + Cleaning Hoods)	Acid Mist PM	50 150	Once in a Month
05	05/SC & PV, B16	Process emission from fume cupboards of semiconductors (Rotary Pumps of Alloying Oven – 1 No)	Acid Mist PM	50 150	Once in a Month
06	06/SC & PV, B16	Process emission from fume cupboards of semiconductors (Alloying preparation hood + Rotary Pumps of Alloying Oven – 3 Nos)	Acid Mist PM	50 150	Once in a Month
07	07/SC & PV, B16	Process emission from fume cupboards of semiconductor (Chemical stores)	Acid Mist PM	50 150	Once in a Month
08	21/SC & PV, B16	Exhaust from DOE building (Laser cutting machine)	PM	150	Once in a Month
09	22/DOE Bldg, B17	Exhaust of fume cupboards of DOE building (Acid etching)	Acid Mist PM	50 150	Once in a Month
10	23/DOE Bldg, B17	Exhaust of fume cupboards of DOE building (RCA & Aluminum etching)	Acid Mist PM	50 150	Once in a Month
11	24/DOE Bldg, B17	Exhaust of fume cupboards of DOE building (Oxide etching & resist stripping)	Acid Mist PM	50 150	Once in a Month
12	25/DOE Bldg, B17	Exhaust of fume cupboards of DOE building (furnace)	Acid Mist PM	50 150	Once in a Month
13	26/B17	Exhaust of fume cupboards of DOE building (Bevel lapping)	Acid Mist PM Hydrocarbon	50 150 --	Once in a Month
14	27/B17	Exhaust of fume cupboards of DOE building (Boron spray)	PM Hydrocarbon	150 --	Once in a Month

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Sl No.	Chimney No. /Bldg.	Chimney attached to	Constituents to be controlled	Tolerance limit mg/NM3	Frequency of analysis
15	28/B17	Exhaust of fume cupboards of DOE building (Photolithography)	PM Hydrocarbon	150 --	Once in a Month
16	32/canteen B25	Exhaust of Diesel Boiler	SO ₂	--	Once in a Month
17	33/SA B14	Exhaust of Automatic Lacquering machine-2	Acid Mist	50	Once in a Month
18	34/SA B14	Exhaust of Automatic Lacquering machine - 1	Acid Mist	50	Once in a Month
19	35/SA B14	Exhaust of Automatic Aqueous cleaning - 2	PM	150	Once in a Month
20	36/SAB14	Exhaust of Automatic Aqueous cleaning - 1	PM	150	Once in a Month
21	37/SAB14	Exhaust of Selective soldering machine	PM	150	Once in a Month
22	38/SA B14	Exhaust of Reflow oven (SMT Line - 2)	PM	150	Once in a Month
23	39/SA B14	Exhaust of Reflow oven (SMT Line)	PM	150	Once in a Month
24	40/SA B14	Exhaust of Manual Cleaning Booth	Acid Mist	50	Once in a Month
25	41/SA,B14	Exhaust of Lacquering Booth	Acid Mist	50	Once in a Month
26	42A/SA,B14	Exhaust of wave soldering machine	Hydrocarbon	--	Once in a Month
27	42B/SA,B14	Exhaust of wave soldering machine	Lead Fumes	20	Once in a Month
28	43A/SA B14	Exhaust of wave soldering machine -2 (SEHO)	Hydrocarbon	--	Once in a Month
29	43B/SA B14	Exhaust of wave soldering machine -2 (SEHO)	Lead Fumes	20	Once in a Month
30	44A/SA B14	Exhaust of wave soldering machine -1	Hydrocarbon	--	Once in a Month
31	44B/SA B14	Exhaust of wave soldering machine -1	Lead Fumes	20	Once in a Month
32	45/SA, B14	Exhaust of Ultrasonic cleaner	PM	150	Once in a Month
33	46/SA,B14	Exhaust of Automatic Cleaning machine - 2	PM	150	Once in a Month
34	47/SA B14	Exhaust of Automatic Cleaning machine - 1	PM	150	Once in a Month

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**ii) DETAILS OF THE CHIMNEYS AND THE PARAMETERS FOR STACK EMISSION
MONITORING at Electronics Systems Division (ESD – Electronic city)**

Sl No.	Chimney No. /Bldg.	Chimney attached to	Constituents to be controlled	Tolerance limit mg/NM3	Frequency of analysis
1	LMF	Drier attached to NMP solvent recovery system	PM SO ₂ NO _x	As per test standard	Once in a quarter



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ANNEXURE – IV

FORMAT FOR REPORTING STACK EMISSION MONITORING

Chimney No.:

Stack attached to:

Sl. No.	Tests	Results	Tolerance limit	Protocol
1	Temperature, °C			
2	Velocity, m/s			
3	Flow, Nm ³ /hr.			
4	Parameter 1			
5	Parameter 2			
6	Parameter 3			

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ANNEXURE – V

Format for reporting continuous ambient air quality monitoring (24 hours)

Frequency: monthly (EDN)+ quarterly (ESD)

No. Of samples in a year: 12 +4

Sl. No.	Parameters	Time weighted Average	Result	Tolerance Limits	Method of measurement
1	Sulphur Dioxide (SO ₂), µg/m ³	24 hours		80	<ul style="list-style-type: none"> Improved West and Gacke Ultraviolet fluorescence
2	Nitrogen Dioxide(NO ₂), µg/m ³	24 hours		80	<ul style="list-style-type: none"> Modified Jacob & Hoehheiser (Na – Arsenite) Chemiluminescence
3	Particulate Matter (Size less than 10µm) or PM ₁₀ µg/m ³	24 hours		100	<ul style="list-style-type: none"> Gravimetric TOEM Beta attention
4	Particulate Matter (Size less than 2.5 µm) or PM _{2.5} µg/m ³	24 hours		60	<ul style="list-style-type: none"> Gravimetric TOEM Beta attention
5	Ozone (O ₃) µg/m ³	1 Hour		180	<ul style="list-style-type: none"> UV photometric Chemiluminescence Chemical Method
6	Lead (Pb) µg/m ³	24 hours		1.0	<ul style="list-style-type: none"> AAS/ICP method after sampling on EPM 2000 or equivalent filter paper ED-XRF using Teflon filter
7	Carbon Monoxide (CO) µg/m ³	1 Hour		04	<ul style="list-style-type: none"> Non Dispersive Infra Red (NDIR) Spectroscopy
8	Ammonia(NH ₃) PM ₂ µg/m ³	24 hours		400	<ul style="list-style-type: none"> Chemiluminescence Indophenol blue method
9	Benzene(C ₆ H ₆), µg/m ³	Annual*		05	<ul style="list-style-type: none"> Gas chromatography based continuous analyzer Adsorption and Desorption followed by GC analysis
10	Benzo(a)Pyrene(BaP) – particulate phase only, ng/m ³	Annual*		01	<ul style="list-style-type: none"> Solvent extraction followed by HPLC/GC analysis
11	Arsenic(As) ng/m ³	Annual*		06	<ul style="list-style-type: none"> AAS/ICP method after sampling on EPM 2000 or equivalent filter paper
12	Nickel(Ni), ng/m ³	Annual*		20	<ul style="list-style-type: none"> AAS/ICP method after sampling on EPM 2000 or equivalent filter paper.

*: Likely to be reduced

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ANNEXURE – VI

Details of number of samples to be analysed per year

Sub: Contract for Stack emission and Ambient Air Quality Monitoring at BHEL, Electronics Division (560026) & BHEL Electronics Systems Division (560100)

Sl. No.	Item description	Location of sample collection	Total No. of samples in a year
STACK EMISSION MONITORING			
1	Acid mist + Particulate Matter	EDN	132
2	Acid mist + Particulate Matter + Hydro carbon	EDN	12
3	Particulate Matter+ Hydrocarbons	EDN	24
4	Particulate matter	EDN	108
5	Sulphur dioxide (SO ₂)	EDN	12
6	Hydrocarbon	EDN	36
7	Lead fumes	EDN	36
8	Acid Mist/Acid fumes	EDN	48
9	Particulate matter + Sox+NOx	ESD	4
AMBIENT AIR QUALITY MONITORING			
1	Sulphur Dioxide(SO ₂), µg/m ³ , Nitrogen Dioxide(NO ₂), µg/m ³ , Particulate Matter (Size less than 10µm) or PM ₁₀ , µg/m ³ , Particulate Matter (Size less than 2.5 µm) or PM _{2.5} , µg/m ³ , Ozone(O ₃), µg/m ³ , Lead(Pb), µg/m ³ , Carbon Monoxide(CO), µg/m ³ , Ammonia(NH ₃), µg/m ³ , Benzene(C ₆ H ₆), µg/m ³ , Benzo(a)Pyrene(BaP) – particulate phase only, ng/m ³ , Arsenic(As) ng/m ³ and Nickel(Ni), ng/m ³	EDN (Monthly) & ESD (Quarterly)	16

Frequency of Collection: Monthly at EDN and Quarterly at ESD

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