Government of India
Bhabha Atomic Research Centre
Health Safety & Environment Group

Ref: RSSD/PC/2020/OPP-10188
Date: 14/10/2020

Sub: Quotations are invited for Fabrication, Supply, Installation of 5 feet bench laboratory fume hoods (4 nos.), 4 feet bench laboratory fume hood (1 no.), back filler panel for two 5 feet bench laboratory fume hoods and FRP ducting as per the specifications attached as Annexure – I, dismantling and disposal of the waste and packing material generated during fabrication.

Job description: Fabrication, Supply, Installation of following items as per the detailed technical specifications attached as Annexure-I

1. 5 feet bench laboratory fume hoods with storage cabinets (4 nos.).
2. 4 feet bench laboratory fume hood with one organic solvent storage cabinet (1 no.).
3. Fixing of back filler panel for 5 feet bench laboratory fume hoods (2 nos.).
4. FRP Ducting for all above-mentioned fume hoods till main exhaust duct present in the room.
5. Delivery, Installation of fume hoods with ducting at site.
6. All civil, plumbing and electrical works for the fume hoods with ducting.
7. Dismantling and disposal of the waste and packing material generated during fabrication.

Detailed description:

1. Job description: Fabrication, Supply, Installation of 5 feet bench laboratory fume hoods (4 nos.), 4 feet bench laboratory fume hood (1 no.), back filler panel for two 5 feet bench laboratory fume hoods and FRP ducting as per the specifications attached as Annexure – 1, dismantling and disposal of the waste and packing material generated during fabrication.
2. Bidder shall quote for “Fabrication, Supply, Installation of 5 feet bench laboratory fume hoods (4 nos.), 4 feet bench laboratory fume hood (1 no.), back filler panel for two 5 feet bench laboratory fume hoods and FRP ducting as per the specifications attached as Annexure - 1, dismantling and disposal of the waste and packing material generated during fabrication.”
3. All type of taxes and excise duties shall be quoted separately. All applicable forms shall be provided wherever necessary.
4. GST of 5% is applicable for the purchase against the GST exemption certificate.
5. The quotations are to be strictly in printed letter head and the quotation format should consist of sales tax registration number registered with local ST authority/CST authority, PAN number of the firm, GST, TAN/TIN numbers, HSN Code, Service tax registration number etc.
6. Quotation must reach the undersigned by 23/11/2020 and must be sent in a sealed envelope superscribed with the above reference number and due date given above, by Government Post only.
7. The address on the envelope should read
   “Fabrication, Supply, Installation of Laboratory fume hoods with ducting”
   Addressed to
   Smt. Supreetha P Prabhu
   Internal Dosimetry Section, RSSD,
   Modular Labs, BARC, Trombay, Mumbai – 400 085
8. Cost should include material, labour and any other expenditure incurred on it.
9. The fabrication work will be subject to inspection by our engineer. Bidder shall not dispatch the finished component prior to the approval by our engineer. Necessary inspection facilities should be provided to our engineer during the fabrication at bidder’s premises. Further for any inquires please contact Smt. Supreetha P Prabhu, 022-25590914/25590915; Email: sprabhu@barc.gov.in.
10. The bidder shall deliver the finished products after approval by our engineer, within 16 weeks from the date of firm work order issued to the bidder. The finished material shall be delivered by the bidder at BARC North Gate Central stores.
11. Incomplete offer/offered received after the due date shall not be considered.
12. Quotation must indicate the delivery period and the validity of offer. Offer should be valid for at least 90 days from 23/11/2020 and the maximum job completion time shall not exceed 16 weeks.
13. The items under the work order shall be guaranteed for a satisfactory performance against manufacturing defects and faulty workmanship, for a period of 12 months from the date of final acceptance.
14. All work shall be done with good workmanship. Our supervisor will supervise the quality of work.
15. Group Director, Health Safety & Environment Group, BARC reserves the right to accept/reject any or all quotations without any reason.

Encl: Annexure-1

To
The all concerned…….

(Probal Chaudhury)
Head, RSSD

Shri. Prabal Chaudhury
Shri. PRBAL CHAUDHURY
Head, Radiation Safety Systems Division
Government of India

(Signed)
Annexure – I

Description of the fabrication work: Fabrication, Supply, Installation of 5 feet bench laboratory fume hoods (4 nos.), 4 feet bench laboratory fume hood (1 no.), back filler panel for two 5 feet bench laboratory fumehoods and FRP ducting as per the specifications mentioned below, dismantling and disposal of the waste and packing material generated during fabrication. Material required for manufacturing and procedure qualification has to be arranged by supplier.

TECHNICAL SPECIFICATIONS:

General Specifications for fume hood with ducting:
- **Quantity:**
  - 5 feet bench laboratory fume hoods required: 4 nos.
  - 4 feet bench laboratory fume hoods required: 1 no.
- **Dimensions:**
  - 5 feet standard fume hood (5'L x 3.2'D x 8'H)
  - 4 feet standard fume hood (4'L x 3.2'D x 8'H)
- **Structure:**
  - Should be made of SS316 with epoxy coating and should be chemical/acid and heat resistant.
- **Inner lining:**
  - HPL & Fire-retardant grade Trespa and should be chemical/acid resistant and heat resistant.
- **Fumehood worktop:**
  - Should be at a height of 3 feet from the ground and should be made of 16 mm thick top of Fire-retardant grade Trespa worktop with skirting.
- **Fumehood lighting:**
  - LED lighting 220V with vapour proof fitting for proper illumination.
- **Lighting fixtures:**
  - Lighting fixtures and power points in fume hood table should be placed in such a way that they are easily maintained from outside.
  - Lighting fixtures should be of make Philips/Wipro.
- **5 feet fume hoods:**
  - 4-legged frame support for two 5 feet fume hood.
  - Two acid storage cabinets (2.5' L x 3' D x 3' H) should be provided below one 5 feet fume hood.
  - Ordinary storage cabinets (2' L x 2' D x 2.5' H) on castors should be provided below two 5 feet fume hoods and ordinary storage cabinets (2'L x 2'D x 3'H) without castors below one 5 feet fume hood (2 cabinets below each 5 feet fume hood). Each ordinary storage cabinet should include two adjustable shelves.
  - Back filler panel for two five feet fume hoods each of dimension: 5'L x 8'H.
- **4 feet fume hood:**
  - One organic solvent / flammable liquid storage cabinet (4' L x 2' D x 3' H) should be provided below the 4 feet fume hood.
- **Ceiling enclosure:**
  - Front and side ceiling enclosure panel, rear filler panel should be provided for each fume hood.
- **Electrical connections:**
  - Four electrical connections 6/16A with socket and tiny trip should be provided for each fume hood.
  - All electrical wiring should be FRLS class with color coded wires. Multi stranded copper conductor FRLS class wires should follow the color coding as red, yellow and blue for phases, black for neutral and green for earthing. Make of wire should be Finolex/RR Kabel/Polycab/Uniflex.
  - All electrical switches, socket and power boards would be of fire-retardant material and preferred make of switches, socket and power boards would be Legrand (Arteor)/ MK (Aspect)/Anchor (Vision)/Schneider (Zencelo). MCBs should be of the make Legrand/Siemens/L&T/Schneider.
  - Fume hood should be given proper earthing at two distinct locations with proper size of earth wire.
  - All electrical wiring should be done by qualified/certified electrician and the electrical test report should be issued by the supplier.
- **PP cup sink & faucet:**
  - Remote control water valve & ceramic / PP cup sink along with faucet, single way water fitting with 6" rigid gooseneck should be provided in one 5 feet fume hood and one 4 feet fume hood. Tap should be epoxy coated.
- **Fumehood ducting:**
  - FRP ducting of the fume hoods should be fabricated with 6mm thick FRP material up to the exhaust present inside the lab and the connection at the junction should be leak tight. (Quantity: ~ 600 sq. ft)
- Connection between exhaust duct present in the room and new ducting should be carried out by flange joint after preparation of flange joint at existing tapping inside room.
- Separate isolation / air flow balancing with heavy duty FRP damper should be provided for individual fume hood work table at site.
- Fume hood Sash:
  - Vertical rising sash counter-balanced with pulley and counterweight system.
  - Sash should be made of toughened glass. Smooth and light sash operation. Clear openable height = 750 mm.
- Face velocity:
  - The fume hood should always maintain a face velocity greater than 0.5m/s at the sash opening height of 30cm.
- Construction material:
  - All structural material of construction including fume hood leg frames and cabinets, should be made of SS-316 with epoxy coating and should be chemical/acid and heat resistant.

Testing and Certification:

2. Certification of flow rate/ air exchange of fume hood should be issued by the supplier after installation.

General Terms and conditions:

1. Only original manufacturers / fabricators with adequate Quality Control facilities need to submit their offers. Vendors submitting offers should comply with requirements listed in section 7 ‘Vendor requirements’.
   Factory visit will be carried out for the purpose of vendor evaluation. Vendor should also arrange for the quoted system during factory visit. Only vendors complying with these requirements will be considered for further technical evaluation / purchase.
2. Installation of the above systems is the responsibility of the vendor. Vendors are hereby informed that personnel of private companies need valid police verification certificates to enter BARC premises for installation.
3. Compliance of the quoted product to tender specification should be sustained by the vendor with the help of documentation such as brochures and other technical literature. Just meaning ‘complied’ against each specification will not be considered sufficient in the absence of supporting documentation and such offers are liable to be summarily rejected.
4. Warranty should be for one year from date of installation.
5. The supplier should dismantle and dispose the old structures including the packing material generated during fabrication to the designated disposal point at the site as per standard procedure.
6. Quoted Prices should include transportation, installation, and maintenance for a year, including all manufacturing flaws.
7. Vendor requirements:
   i) Vendors having readily available man-power with valid police verification certificates should only participate in the bidding.
   ii) Vendors should enclose a list of their clients to whom they have supplied metallic fumehoods.
   iii) Fume Hoods to be type-tested as per ASHRAE 110 or EN 14175 by a certified third-party. This document should be added in bid submission.
8. COVID related guidelines applicable to the contractor for the site works at BARC as published on BARC website or as issued by Engineer in Charge shall be scrupulously followed during the execution of work.
9. This work involves working in restricted area with security restrictions on entry of workers, working time etc. To the extent possible the work shall be carried during the normal working hours i.e. 9.30 A.M to 5.30 P.M. Monday to Friday. Prior permission will be required to work on holidays and beyond office hours on working & holidays.
10. Safety and security rules:
   a) Police verification certificate is required for all workers and supervisor deployed at the site.
   b) Security rules and transport rules at BARC, Trombay premises shall be strictly followed.
   c) Laborers under 18 years shall not be allowed to work at site.
   d) Department shall not be responsible for any injury caused to contractor workforce due to any reason / unsafe workmanship while working at site.

(Probal Chaudhury)
Head, RSSD

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