

TENDER DOCUMENT FOR



SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH

(Ministry of Earth Sciences, Govt. Of India)

Headland Sada, Vasco-da-Gama

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NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
(Ministry of Earth Sciences, Govt. Of India),
HEADLAND SADA, VASCO-DA-GAMA,
GOA - 403 804

TENDER NO. NCAOR/HSS-017/PT-24
TENDER FOR SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY
FLUORESCENCE SPECTROMETER.

1.	SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER Specifications Quantity	As per Annexure-I 01 No.
2.	General Terms and Conditions	As per Annexure II
3.	Cost of Tender Documents (In Person)	US \$ 50.00 ` 2000.00
4.	Cost of Tender Documents (By Post)	US \$ 65.00 ` 2050.00
5.	EMD	<p>Tender documents can be downloaded by tenderers from NCAOR website. In case a tenderer is using the documents and forms downloaded from the website, the cost of tender documents shall be sent in the form of Bank Draft in a separate envelope along with the tender.</p> <p>A) Foreign Bidders shall submit EMD along with their tender, in the form of a bank guarantee only for a sum of US \$ 1900.00 (US\$ One Thousand Nine Hundred only)</p> <p>B) Indian Bidders shall submit EMD along with their tender, either by DD drawn in favor of NCAOR, for a sum of ` 1, 00,000/- (Rupees One Lakh only) payable at Vasco-da-Gama only.</p> <p style="text-align: center;">Or</p> <p>In the form of a bank guarantee for a sum of ` 1,00,000/- (Rupees One Lakh only)</p>
6.	Last Date and time for issue of tender documents	MONDAY 25.08.2014 1600Hrs (IST)
7.	Last Date and time for submission of sealed quotations	TUESDAY 26.08.2014 1700Hrs (IST)
8.	Date and time of tender opening	WEDNESDAY 27.08.2014 1000Hrs (IST)

Technical Specification for X-Ray Fluorescence Spectrometer (XRF).

A. Technical Specifications

- Fully automatic **Wavelength Dispersive sequential XRF Spectrometer** capable of analyzing elements and compounds from Beryllium to Uranium in the concentration ranges from PPM level to 100% in rocks, soils and all other geological materials in pellet as well as fusion bead form, with high speed and high precision. The system shall be capable of analyzing major, minor and trace elements including halogens in geological samples. The system should also have provision for analyzing liquid/loose powder samples.
- Floor mounted single cabinet XRF with minimum space requirement.
- All kinds of safety protections, like electrical, electronic & radiations should be in built & as per the international norms and should be clearly specified in the offer.
- High performance fully automated, compact, computer controlled sequential wavelength-dispersive XRF. The instrument shall be capable of conducting with high precision qualitative, semi-quantitative (standard less) and quantitative analysis from PPM level to 100%. The spectrometer should be microprocessor controlled and fully compatible with PC with latest configuration.
- The system shall be capable of handling solids, liquids, loose powders, pressed powders, fused beads (25mm to 50 mm dia samples) in a variety of sample types.
- Vacuum Chamber Volume must be lowest with minimum number of vacuum joints and should have air lock device preferably controlled by single / dual built in vacuum pump.
- Sample handling must have continuous direct sample loading facility & an **automatic sample changer** with capacity to directly handle at least **50** samples of various dimensions. The complete hardware like sample changer, holders etc. along with necessary software should be quoted to analyse at least 50 samples at a time.
- **Dust collection system** (not primary beam filter) to collect dust/ loose powder from the sample surface before it enters main chamber should be inbuilt in the spectrometer Liquid/loose powder analysis kit should be supplied.
- **Generator**: The rating of the generator should be **4.0 kW** (or more), **60 kV** (or better) & **140 mA** (or better). There should be **high** level of Generator and Tube stability. Minimum increment of kV/mA should be in steps of one. HT and current should be programmable with safety built in the control software.

- **X-Ray tube:** 60KV, min; 140mA or better; 4kW Rh-tube with ceramic insulation having Be window thickness of not more than 75 and (not less than 50microns). X Ray Spectrometer must have a protective covering/ feature to deal with accidental sample spillage and corrosive samples. It should have minimum sample to anode distance for maximum intensity. Vendor should ensure special provision in the tube for **drift free performance** of min. 10,000 hours. It should have facility for **Auto Tube Breeding**, monitoring tube life, generator flashes, water flow, temp and other status. X-ray tube power should be specified.
- **Optics:** Programmable **filter changer** with sufficient numbers of **primary beam filter** (minimum 4 No) should be provided. One of the filters should be a beam **stop filter**. Programmable suitable minimum 3 or more, **position collimator masks**. Programmable minimum 3 Nos. of **primary collimators** or more with choice from ultra-high resolution to coarse. It should be equipped with min. 8 position bi-directional crystal changer with all suitable crystals for efficient and fast analysis of the range of elements specified including **halogens** in rocks & soil samples (**F, Cl, Br, I**) and **B** to be quoted. Other optional crystals than above should be quoted with full specifications. **Dust protection device** shall be inbuilt with the system and should be user accessible for cleaning. Individual crystals for Be, B, C, N and halides should be quoted.
- **Detectors:** provision for at least 2 types (**Flow proportional, Scintillation detector**). Detector with fast scanning speed and linearity up to approx 3.5 million CPS should be supplied. Any other detector options, if available to be specified.
- **Counting Electronics:** The spectrometer should have dual multi-channel analyzer to have minimum analysis time. Dynamic corrections for dead time losses and pulse shrinkage must be incorporated.
- **Goniometer:** The goniometer shall be gearless/high precision gear; and microprocessor controlled with $\theta - 2\theta$ decoupled to allow for offset mounting and close coupling of the scintillation detector. Angular accuracy and reproducibility figures to be specified by vendor with documentary evidence. In case of any backlash error, the system should be capable of correcting it automatically. Temperature stability should be 0.05. There should not be any vacuum leakage at higher angles.
- **Branded Computer:** with latest configuration with high-end PC, 17" TFT color monitor and other peripherals. A dedicated high-end colour laserjet printer with network card also should be provided

B. Instrument software:

User friendly intelligent software with following features

- Spectrometer software should be windows latest version including multipoint background correction, line overlap correction, ratio calculation, auto PHD measurement, calibration curve, qualitative analysis incorporating matrix correction,

recalibration programme, limit checks, statistical evaluation, data storage & retrieval with connecting facilities. full screen color graphics. Calibration programme for different applications are required along with efficient matrix correction capability.

- Comprehensive **diagnostic Software** to diagnose all the parts of the equipments.
- Extensive **analytical software package** for **qualitative & quantitative** analysis.
- Hardware and software for remote diagnostics should be built in. The remote facility should access the XRF directly.
- **Standardless software** including set of **standards** for analyzing **trace elements** in geological samples. Standards should be provided with standard less software
- The **licensed copy of the XRF software** shall be provided in **CD- ROM** along with the necessary help free software updates for five years from date of installation should be provided.
- Facility for setting quality control limits for different elements.
- **All operational manuals/Flow charts, instrument manual, important published literature of reference should be supplied free of cost.** All features claimed preferably be substantiated with valid documents.
- Special software for trace element analysis of geological samples.

C. Operating Environment:

- Line Voltage: **230V±10%, 50/60Hz ± 5%, or 3 phase 415V, 50Hz on per Indian standards (without any step-up or step-down transformer)** with protective RF ground. The required material for **RF ground** shall be provided by the supplier.
- The offer should include all accessories/ spares/ consumables for the entire system and its peripherals, which are not covered under the comprehensive warranty and are essential (in the opinion of supplier) for ensuring trouble-free performance of the system for at least 3 years.
- Water chiller: closed circuit cooling unit for water circulation in XRF equipment. Single or three phase to be quoted. The chiller should be capable of controlling water flow as per Kv and mA requirement.
- Reference sample set (~5 glass samples) for calibration maintenance to be quoted
- Instrument calibration and standard sample analysis carried out at manufacture's site, with the analysed sample, should be shipped along with the instrument. On installation the same result to be reproduced by the installation/ service team at our site.

- Installation and operation manuals should be provided with full documentation in English both as hard copy and CD-ROM.
- Vendor should separately quote for suitable UPS for necessary power requirements and for minimum one hour back up.

D. Other requirements:

- Power supply 230V, 50Hz single/three phase to be specified.
- Mechanical dimensions and weight of the XRF to be specified.
- Environmental temperature range and humidity to be specified.
- Temperature stabilization system with temperature stability +/- 0.05°C.
- All kinds of safety protection for radiation, electrical, electronics, EMI should be inbuilt as per international norms; standards to which the instrument conforms to be specified.
- Detailed electrical specification should be mentioned in the offer.
- The supplier must have a proven track record in XRF systems in the field of earth and ocean sciences. A complete list of buyers of the same/similar model for past five years in India should be provided. Demonstration of all functionality as quoted in the Technical Bid in any of laboratory in India where the equipment has been installed.
- A complete pre-installation requisite in terms of space and other infrastructure should be specified in the technical bid.
- **Training of personnel:** After successful installation of the system and its peripherals, selected scientific and technical personnel should be provided with an all inclusive in-depth training on the operation, maintenance and application of the system by factory engineer(s) at the site or at the factory for a week or to our satisfaction (whichever is later).
- Door to door service for the equipments, spares and consumables.

E. Warranty

Onsite warranty period for the equipment and X-ray tube, water chiller etc should be for Two Years comprehensive, with free replacement of faulty/defective parts. Extended comprehensive warranty for a period of minimum next three years should also be quoted. The supplier should also certify to provide guaranteed supply of spares for at least 10 years.

Technical Compliance Statement For X-Ray Fluorescence Spectrometer (XRF)

Sr. No.	Specifications For Supply Of X-Ray Fluorescence Spectrometer (XRF)	Complied/ Not Complied	Extra Features
A.	<p>Technical Specifications:</p> <ul style="list-style-type: none"> ➤ Fully automatic Wavelength Dispersive sequential XRF Spectrometer capable of analyzing elements and compounds from Beryllium to Uranium in the concentration ranges from PPM level to 100% in rocks, soils and all other geological materials in pellet as well as fusion bead form, with high speed and high precision. The system shall be capable of analyzing major, minor and trace elements including halogens in geological samples. The system should also have provision for analyzing liquid/loose powder samples. ➤ Floor mounted single cabinet XRF with minimum space requirement. ➤ All kinds of safety protections, like electrical, electronic & radiations should be in built & as per the international norms and should be clearly specified in the offer. ➤ High performance fully automated, compact, computer controlled sequential wavelength-dispersive XRF. The instrument shall be capable of conducting with high precision qualitative, semi-quantitative (standard less) and quantitative analysis from PPM level to 100%. The spectrometer should be microprocessor controlled and fully compatible with PC with latest configuration. ➤ The system shall be capable of handling solids, liquids, loose powders, pressed powders, fused beads (25mm to 50 mm dia samples) in a variety of sample types. ➤ Vacuum Chamber Volume must be lowest with minimum number of vacuum joints and should have air lock device preferably controlled by single / dual built in vacuum pump. ➤ Sample handling must have continuous direct sample loading facility & an automatic sample changer with capacity to directly handle at least 50 samples of various dimensions. The complete hardware like sample changer, holders etc. along with necessary software should be quoted to analyse at least 50 samples at a time. ➤ Dust collection system (not primary beam filter) to collect dust/ loose powder from the sample surface before it enters main chamber should be inbuilt in the spectrometer. Liquid/loose powder analysis kit should be supplied. 		

	<p>➤ Generator: The rating of the generator should be 4.0 kW (or more), 60 kV (or better) & 140 mA (or better). There should be high level of Generator and Tube stability. Minimum increment of kV/mA should be in steps of one. HT and current should be programmable with safety built in the control software.</p>		
	<p>➤ X-Ray tube: 60KV, min; 140mA or better; 4kW Rh-tube with ceramic insulation having Be window thickness of not more than 75 and (not less than 50microns). X Ray Spectrometer must have a protective covering/ feature to deal with accidental sample spillage and corrosive samples. It should have minimum sample to anode distance for maximum intensity. Vendor should ensure special provision in the tube for drift free performance of min. 10,000 hours. It should have facility for Auto Tube Breeding, monitoring tube life, generator flashes, water flow, temp and other status. X-ray tube power should be specified.</p>		
	<p>➤ Optics: Programmable filter changer with sufficient numbers of primary beam filter (minimum 4 No) should be provided. One of the filters should be a beam stop filter. Programmable suitable minimum 3 or more, position collimator masks. Programmable minimum 3 Nos. of primary collimators or more with choice from ultra-high resolution to coarse. It should be equipped with min. 8 position bi-directional crystal changer with all suitable crystals for efficient and fast analysis of the range of elements specified including halogens in rocks & soil samples (F, Cl, Br, I) and B to be quoted. Other optional crystals than above should be quoted with full specifications. Dust protection device shall be inbuilt with the system and should be user accessible for cleaning. Individual crystals for Be, B, C, N and halides should be quoted.</p>		
	<p>➤ Detectors: provision for at least 2 types (Flow proportional, Scintillation detector). Detector with fast scanning speed and linearity up to approx 3.5 million CPS should be supplied. Any other detector options, if available to be specified.</p>		
	<p>➤ Counting Electronics: The spectrometer should have dual multi-channel analyzer to have minimum analysis time. Dynamic corrections for dead time losses and pulse shrinkage must be incorporated.</p>		

	<ul style="list-style-type: none"> ➤ Goniometer: The goniometer shall be gearless/high precision gear; and microprocessor controlled with $\theta - 2\theta$ decoupled to allow for offset mounting and close coupling of the scintillation detector. Angular accuracy and reproducibility figures to be specified by vendor with documentary evidence. In case of any back lash error, the system should be capable of correcting it automatically. Temperature stability should be 0.05. There should not be any vacuum leakage at higher angles. 		
	<ul style="list-style-type: none"> ➤ Branded Computer: with latest configuration with high-end PC, 17" TFT color monitor and other peripherals. A dedicated high-end colour laserjet printer with network card also should be provided 		
B.	<p><u>Instrument software:</u> User friendly intelligent software with following features</p>		
	<ul style="list-style-type: none"> ➤ Spectrometer software should be windows latest version including multipoint background correction, line overlap correction, ratio calculation, auto PHD measurement, calibration curve, qualitative analysis incorporating matrix correction, recalibration programme, limit checks, statistical evaluation, data storage & retrieval with connecting facilities. full screen color graphics. Calibration programme for different applications are required along with efficient matrix correction capability. 		
	<ul style="list-style-type: none"> ➤ Comprehensive diagnostic Software to diagnose all the parts of the equipments. 		
	<ul style="list-style-type: none"> ➤ Extensive analytical software package for qualitative & quantitative analysis. 		
	<ul style="list-style-type: none"> ➤ Hardware and software for remote diagnostics should be built in. The remote facility should access the XRF directly. 		
	<ul style="list-style-type: none"> ➤ Standardless software including set of standards for analyzing trace elements in geological samples. Standards should be provided with standard less software 		
	<ul style="list-style-type: none"> ➤ The licensed copy of the XRF software shall be provided in CD- ROM along with the necessary help free software updates for five years from date of installation should be provided. 		
	<ul style="list-style-type: none"> ➤ Facility for setting quality control limits for different elements. 		

	<ul style="list-style-type: none"> ➤ All operational manuals/Flow charts, instrument manual, important published literature of reference should be supplied free of cost. All features claimed preferably be substantiated with valid documents. 		
	<ul style="list-style-type: none"> ➤ Special software for trace element analysis of geological samples. 		
C.	<u>Operating Environment:</u>		
	<ul style="list-style-type: none"> ➤ Line Voltage: 230V±10%, 50/60Hz ± 5%, or 3 phase 415V, 50Hz on per Indian standards (without any step-up or step-down transformer) with protective RF ground. The required material for RF ground shall be provided by the supplier. 		
	<ul style="list-style-type: none"> ➤ The offer should include all accessories/ spares/ consumables for the entire system and its peripherals, which are not covered under the comprehensive warranty and are essential (in the opinion of supplier) for ensuring trouble-free performance of the system for at least 3 years. 		
	<ul style="list-style-type: none"> ➤ Water chiller: closed circuit cooling unit for water circulation in XRF equipment. Single or three phase to be quoted. The chiller should be capable of controlling water flow as per Kv and mA requirement. 		
	<ul style="list-style-type: none"> ➤ Reference sample set (~5 glass samples) for calibration maintenance to be quoted 		
	<ul style="list-style-type: none"> ➤ Instrument calibration and standard sample analysis carried out at manufacture's site, with the analysed sample, should be shipped along with the instrument. On installation the same result to be reproduced by the installation/ service team at our site. 		
	<ul style="list-style-type: none"> ➤ Installation and operation manuals should be provided with full documentation in English both as hard copy and CD-ROM. 		
	<ul style="list-style-type: none"> ➤ Vendor should separately quote for suitable UPS for necessary power requirements and for minimum one hour back up. 		
D.	<u>Other requirements:</u>		
	<ul style="list-style-type: none"> ➤ Power supply 230V, 50Hz single/three phase to be specified. 		
	<ul style="list-style-type: none"> ➤ Mechanical dimensions and weight of the XRF to be specified. 		
	<ul style="list-style-type: none"> ➤ Environmental temperature range and humidity to be specified. 		
	<ul style="list-style-type: none"> ➤ Temperature stabilization system with temperature stability +/- 0.05°C. 		

	<ul style="list-style-type: none"> ➤ All kinds of safety protection for radiation, electrical, electronics, EMI should be inbuilt as per international norms; standards to which the instrument confirms to be specified. 		
	<ul style="list-style-type: none"> ➤ Detailed electrical specification should be mentioned in the offer. 		
	<ul style="list-style-type: none"> ➤ The supplier must have a proven track record in XRF systems in the field of earth and ocean sciences. A complete list of buyers of the same/similar model for past five years in India should be provided. Demonstration of all functionality as quoted in the Technical Bid in any of laboratory in India where the equipment has been installed. 		
	<ul style="list-style-type: none"> ➤ A complete pre-installation requisite in terms of space and other infrastructure should be specified in the technical bid. 		
	<ul style="list-style-type: none"> ➤ Training of personnel: After successful installation of the system and its peripherals, selected scientific and technical personnel should be provided with an all inclusive in-depth training on the operation, maintenance and application of the system by factory engineer(s) at the site or at the factory for a week or to our satisfaction (whichever is later). 		
	<ul style="list-style-type: none"> ➤ Door to door service for the equipments, spares and consumables. 		
E	<p><u>Warranty</u></p> <p>Onsite warranty period for the equipment and X-ray tube, water chiller etc should be for Two Years comprehensive, with free replacement of faulty/defective parts. Extended comprehensive warranty for a period of minimum next three years should also be quoted. The supplier should also certify to provide guaranteed supply of spares for at least 10 years.</p>		

TERMS AND CONDITIONS FOR SUBMISSION OF QUOTATION

1) The National Centre for Antarctic and Ocean Research (NCAOR) invites sealed quotations in two-parts from the reputed firms for the **“SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER** for analyzing major, minor and trace elements including halogens in geological samples” as per the specifications given in Annexure-I.

2) The technical and financial bids should be submitted in two separate sealed covers, super scribing “Part –I Technical Bid for **“SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER**”, Tender No., due date and “Part-II Financial bid for **“SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER**”, Tender No., due date. Both the bids should be kept in a single cover by super scribing tender for **“SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER**”, sealed and addressed to the **Director, National Centre for Antarctic & Ocean Research, Headland-Sada, Vasco-da-Gama, Goa – 403 804.** Offer sent through fax will not be accepted.

3) Overwriting and corrections should be attested properly. The bid should be complete in all respects and should be duly signed. **Incomplete and unsigned bids will not be considered at all.**

4) All relevant technical literature pertain to items quoted **with full specifications** (Drawing, if any), information about the products quoted, including brochures if any should accompany the quotation.

5) A list of **reputed clients** to whom the firm has supplied similar items to be furnished along-with the quotation.

In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.

The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.

6) Quotation should be **valid for a period of 120 days** from the date of tender opening and the period of delivery required should also be clearly indicated. If the supplier fails to deliver the

goods within the time to be agreed upon, for delayed deliveries and for delays in installation (wherever applicable). NCAOR reserves the right to **levy liquidated damages** at the rate of 0.5% per week or part thereof up to a maximum of 5%.

7) The **warranty period** and the kind of **post-warranty support** should be indicated. Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the Purchase Order / Contract.

8) **Technical bid should contain EMD.**

A) Foreign Bidders shall submit **EMD** along with their tender **in the form of a bank guarantee** for a sum of US \$ 1900.00 (US\$ One Thousand Nine Hundred only) from any reputed bank (scheduled bank in India or foreign bank having operational Branch in India) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

B) Indian Bidders shall submit **EMD** along with their tender, **either By DD** drawn in favor of NCAOR, on any nationalized bank for a sum of ` 1,00,000/- (Rupees One Lakh only) payable at Vasco-da-Gama only **or in the form of a bank guarantee** for a sum of ` 1,00,000/- (Rupees One Lakh only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.

Tender without EMD in the envelope containing technical bid shall be summarily rejected. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract.

The earnest money will be liable to be forfeited, if the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of his tender.

9) Please **specify the Make/Brand** and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.

10) The Purchaser requires that the bidders suppliers and contractors observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy, the following are defined:

“Corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution:

“fraudulent practice” means a misrepresentation or omission of facts in order to influence a procurement process or the execution of contract;

“collusive practice” means a scheme or arrangement between two or more bidders, with or without the knowledge of purchaser, designed to establish bid prices at artificial, noncompetitive levels; and

“coercive practice: means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of contract;

The purchaser 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 or coercive practices in competing for the contract in question; The Decision of Director, NCAOR shall be final and binding.

11) Bidders that doesn't manufacture the goods it offers to supply shall submit Manufacturer's Authorization form on the letterhead of the Manufacturer duly signed and stamped by a person with the proper authority to sign documents that are binding on the Manufacturer as per the following format should be submitted failing which the quotation will not be considered.

To
The Director
NCAOR
GOA

Sub: Manufacturers' Authorization form against Tender No:_____

We_____ (Name of the Manufacturer) who are official manufacturers of _____ (Type of goods manufactured) having factories at _____ (full address of Manufacturer's factories) do hereby authorize _____ (Name of the Bidder) to submit a bid against your Tender No. _____ for the _____ Goods manufactured by us and to subsequently negotiate and sign the contract.

We hereby extend our full guarantee and warranty with respect to the Goods offered by the above firm

Manufacturer's Name:

NATIONAL CENTRE FOR ANTARCTIC AND OCEAN RESEARCH

Signature of Authorized
representative of the Manufacturer:

Duly authorized to sign this Authorization on behalf of : _____(Name of the Bidder)

Date:

In case the bidder not doing business within India, shall furnish the certificate to the effect that the bidder is or will be represented by an agent in India equipped and able to carry out the supply, maintenance, repair obligations etc., during the warranty and post warranty period or ensure a mechanism at place for carrying out the supply, maintenance, repair obligations etc., during the warranty and post- warranty period.

12) The order acknowledgement should be from the principals and if the Indian Agent is empowered to quote and to furnish order acknowledgement, a copy of agreement entered by you with the Indian Agent to be furnished.

13) **Compliance Statement:** Equipments point-by-point comparison/compliance statement with **technical specification** indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also **compliance statement for all commercial terms** of the tender document.

14) NCAOR is not entitled to issue form “**C/D**”. No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.

15) To avail duty concessions i.e. **Excise Duty** as per Govt. notification 10/97 & **Custom Duty** as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any.

16) **Technical Bid should contain** all details and specifications of the equipment offered, delivery schedule, warranty, payment term, installation, training, post-warranty, user-list, service support **WITHOUT PRICE** and **Financial bid should contain** details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing.

In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.

The Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries.

For Goods manufactured in India:

F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA.

17) In case of imported stores both **FOB and CIF prices upto Indian port of entry** namely Goa and for indigenous stores on F.O.R. destination basis should be indicated. However tender should contain item-wise prices including total ex-works price, overall weight & dimensions of the equipment and cost of packing forwarding, approx. cost of air-freight charges for delivery up to Goa, India.

18) A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.

19) The firm to the full satisfaction of the NCAOR should carry out the **installation and commissioning** at the NCAOR premises and the time-frame for the whole process should be specified in the technical bid.

20) A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.

21) **No advance payment** will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment and incase of imported stores by **irrevocable letter of credit**. The payment will be authorized after submission of a Bank Guarantee for 10% value of the order towards warranty guarantee. The **performance Bank Guarantee** should be furnished within 15 days from the date of placement of order from a reputed bank (scheduled bank in India **or** foreign bank operating in India) valid till 60 days after the warranty period.

22) Suppliers should clearly define the mechanisms of **post-warranty** maintenance or support. Supplier should undertake to support the product for a minimum period of 5 years (post-

warranty). Post Warranty, AMC charges for a period of 3 years (annual bases) should also be quoted separately in the financial bid.

23) If the quoted item needs to be imported then the undertaking needs to be produced from the original supplier stating that Post Warranty support for a minimum period of 7 years will be provided from the original supplier to NCAOR on LC Terms of payment. If payment needs to be made and **spares will be supplied on the lowest rate quoted** than to any other customer with providing the sales price list to the NCAOR periodically as and when increase/decrease in prices.

24) Two sets of operational, service/troubleshooting manuals and diagrams to be supplied with **“SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER.**

25) **The submission of tender** shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase Order.

26) Expenditure involved towards any extra materials required for labour involved for successful installation of the equipment, if not quoted for, would have to be borne by the tenderer.

27) **Acceptance of this tender** form and submission of the quote within the stipulated time would be treated as:

a) The tenderer has understood all requirements as described in our Tender document.

b) Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation.

c) Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time.

28) Training /Installation charges should be clearly indicated including the scope of training.

29) Tender should clearly define the **infrastructure facilities required** for installation of the equipment.

30) NCAOR will not be liable for any obligation until such time NCAOR has communicated to the successful bidder of its decision to release the Purchase Order.

31) **NCAOR will not be responsible for any postal delays.**

32) Bidders shall note that NCAOR will not entertain any correspondence or queries on the status of the offers received against this Tender Invitation.

33) Tenders from Manufacturers/Suppliers/Tenderers whose performance was not satisfactory in respect of quality of supplies and delivery schedules in any organizations, are liable for rejection. The tenders that do not comply with the above criteria and other terms & conditions are liable for rejection.

34) The Director, NCAOR does not bind to accept the lowest quotation and reserves the right to himself, to reject or partly accept any or all the quotations received without assigning any reason.

35) All disputes arising in connection with executing the purchase order will be subject to the Jurisdiction of the Courts in Goa only.

COMMERCIAL COMPLIANCE STATEMENT FOR SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER.

Sr. No.	COMMERCIAL SPECIFICATION FOR SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER.	COMPLIED/ NOT COMPLIED	EXTRA FEATURES
1	A list of reputed clients to whom the firm has supplied similar items to be furnished along-with the quotation.		
2	In the TECHNICAL BID, the Bidder should furnish the Name and address of the Purchasers placed orders on similar equipment with order No, date, Description and quantity, Date of Supply alongwith Contact person Telephone No, Fax No, and e mail address of Purchaser.		
3	The Bidder should enclose copies of Purchase Orders only in the FINANCIAL BID.		
4	Quotation should be valid for a period of 120 days from the date of tender opening and the period of delivery required should also be clearly indicated.		
5	The warranty period and the kind of post-warranty support should be indicated. Warranty shall commence from the date of installation and acceptance of the complete equipment supplied under the Purchase Order / Contract.		
6	Foreign Bidders shall submit EMD along with their tender in the form of a bank guarantee for a sum of US \$ 1900.00 (US \$ One Thousand Nine Hundred only) from any reputed bank (scheduled bank in India or foreign bank having operational Branch in India) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.		
7	Indian Bidders shall submit EMD along with their tender, either By DD drawn in favor of NCAOR, on any nationalized bank for a sum of ` 1,00,000/- (Rupees One Lakhe only) payable at Vasco-da-Gama only or in the form of a bank guarantee for a sum of ` 1,00,000/-(Rupees One Lakhe only) from any reputed bank (scheduled bank) initially valid for 180 days from the date of closing of the tender as per the proforma enclosed. This bank Guarantee in original shall be submitted along with the technical bid only.		
8	Tender without EMD in the envelope containing technical bid shall be summarily rejected. The EMD of unsuccessful bidders shall be returned within 30 days of the award of contract.		
9	Please specify the Make/Brand and Name of the Manufacturer with address, country of origin and currency in which rates are quoted.		
10	The order acknowledgement should be from the principals and if the Indian Agent is empowered to quote and to furnish order acknowledgement, a copy of agreement entered by you with the Indian Agent to be furnished.		
11	Compliance Statement: Equipments point-by-point comparison/compliance statement with technical specification indicated in the tender, should be enclosed along with your tender as well as any other extra features of the equipment be shown separately therein and also compliance statement for all commercial terms of the tender document.		
12	NCAOR is not entitled to issue form " C/D ". No Sales Tax or any other Tax shall be payable by us unless payment of the same is specifically mentioned by the suppliers in their bids and same is legally leviable.		
13	To avail duty concessions i.e. Excise Duty as per Govt. notification 10/97 & Custom Duty as per Govt. notification 51/96, NCAOR will provide exemption certificates. Hence, the rates should be split into basic cost and Excise Duty if any.		
14	Technical Bid should contain all details and specifications of the equipment offered, delivery schedule, warranty, payment term,		

	installation, training, post-warranty, user-list, service support WITHOUT PRICE and Financial bid should contain details of the price(s) of the item(s) quoted in the technical bid. The Technical bid should not contain any references to the pricing.		
15	In case the technical bid contains any direct or indirect reference to quoted price the bid is liable to be rejected.		
16	The Prices shall be quoted in Indian Rupees for offers received for supply within India and in freely convertible foreign currency in case of offers received for supply from foreign countries. For Goods manufactured in India:		
17	F.O.R GOA price should be indicated. However tender should contain item-wise prices including total ex-works price, Excise Duty, VAT/Taxes, Charges for Inland Transportation, Insurance and other local services required for the delivering the goods on F.O.R GOA.		
18	In case of imported stores both FOB and CIF prices upto Indian port of entry namely Goa and for indigenous stores on F.O.R. destination basis should be indicated. However tender should contain item-wise prices including total ex-works price, overall weight & dimensions of the equipment and cost of packing forwarding, approx. cost of air-freight charges for delivery up to Goa, India.		
19	A Committee constituted by the Director, NCAOR for the purpose reserves the right to open the bids. Only technical bids will be opened on the date and time mentioned in the tender document. The financial bids of those tenderers whose technical bids are found to be meeting our specifications only will be opened in their presence at date and time to be notified later.		
20	The firm to the full satisfaction of the NCAOR should carry out the installation and commissioning at the NCAOR premises and the time-frame for the whole process should be specified in the technical bid.		
21	A technical Committee constituted by the Director will assess the product supplied/installed for their quality and their conformity to the specifications provided by the firm in their quotations. Any item(s) identified by the Committee to be not as per the specifications or are found to be of inferior quality will be rejected, and the bills towards the supply will not be processed for payment till proper replacements are provided.		
22	No advance payment will be made. Payment for indigenous stores shall be made within 30 days from the date of receipt, acceptance and satisfactory installation of equipment and incase of imported stores by irrevocable letter of credit .		
23	Suppliers should clearly define the mechanisms of post-warranty maintenance or support. Supplier should undertake to support the product for a minimum period of 5 years (post-warranty). Post Warranty, AMC charges for a period of 3 years (annual bases) should also be quoted separately in the financial bid.		
24	If the quoted item needs to be imported then the undertaking needs to be produced from the original supplier stating that Post Warranty support for a minimum period of 7 years will be provided from the original supplier to NCAOR on LC Terms of payment. If payment needs to be made and spares will be supplied on the lowest rate quoted than to any other customer with providing the sales price list to the NCAOR periodically as and when increase/decrease in prices.		
25	Two sets of operational, service/troubleshooting manuals and diagrams to be supplied with "SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER.		
26	The submission of tender shall be deemed to be an admission on the part of the tenderer, had fully acquainted with the specifications, drawings etc. and no claim other than what stated in the tender shall be paid in the event of award of Purchase		

	Order.		
27	Expenditure involved towards any extra materials required for labour involved for successful installation of the equipment, if not quoted for, would have to be borne by the tenderer.		
28	<p>Acceptance of this tender form and submission of the quote within the stipulated time would be treated as:</p> <ul style="list-style-type: none"> • The tenderer has understood all requirements as described in our Tender document. • Acceptance to provide/establish all the facilities mentioned in our tender without any price escalation, if the tenderer finds it necessary to add any hardware or software or any other materials during implementation. • Agreeing to execute order to the satisfaction of NCAOR or its authorized representatives within the stipulated time. 		
29	Training /Installation charges should be clearly indicated including the scope of training.		
30	Tender should clearly define the infrastructure facilities required for installation of the equipment.		

QUESTIONNAIRE

- a. **Name of the Manufacturer / Tenderer.**
- b. **Full postal address with Telephone, Telefax, Email.**
- c. **Please specify whether Public Limited, Company, Private Organization or Partnership Firm.**
- d. **Nature of the Business.**
- e. **Date of Establishment.**
- f. **Present Turnover.**
- g. **Permanent Income Tax Ref. No.**
- h. **C.S.T. / S.T. NO.**
- i. **Address & Telephone Nos. Of your branch office in GOA (please specify whether Distributing/Servicing/Marketing the products).**
- j. **Technical Compliance statement.**
- k. **Commercial Compliance statement.**
- l. **Reference of reputed Customers.**
- m. **Details of the highest order executed and value thereof.**
- n. **Authorization from Manufacturer/Supplier attached.**
- o. **Tender fee submitted/enclosed.**
- p. **E.M.D. attached with TECHNICAL BID.**
- q. **Infrastructure facilities required for installation & commissioning attached.**
- r. **Technical Specifications/Literature/Brochure attached.**
- s. **Tender Acceptance.**

TENDER ACCEPTANCE UNDERTAKING

To

The Director,
NCAOR, Headland Sada,
Vasco – Goa.

Having examined the tender document for “ **SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER**” we the undersigned hereby offer to supply the equipment in conformity with all specifications and conditions set out in the tender document.

We enclosed all the relevant documents as per the tender.

We understand that you are not bound to accept the lowest or any tender received.

Date :

(Signature of Bidder)

Name :

Designation :

Seal

BANK GUARANTEE FORMAT FOR FURNISHING EMD

To

**NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
Headland Sada, Vasco-da-Gama, GOA 403 804, INDIA**

Whereas _____
(Hereinafter called the "tenderer"
has submitted their offer dated _____
for the supply of _____
(Herein after called the "tender"

WE _____ of having our registered office
At _____ are bound unto the NATIONAL
(Hereinafter called the Bank)

CENTRE FOR ANTARCTIC & OCEAN RESEARCH, Ministry of Earth Sciences, Govt. Of India having its office at Headland Sada, Vasco Goa 403 804, India (herein after called NCAOR which expression shall unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assigns) in the sum of _____ for which payment will and truly to be made to. NCAOR, the Bank binds itself, its successors and assigns by these presents. Sealed with the common seal of the said Bank this _____ day of _____ 2014.

THE CONDITIONS OF THIS OBLIGATION ARE:

- 1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- 2) If the tenderer having been notified of the acceptance of his tender by NCAOR during the period of its validity.
 - 2.a) If the tenderer fails to furnish the Performance security for the due performance of the contract.
 - 2.b) Fails or refuses to execute the contract

We undertake to pay NCAOR up to the above amount upon receipt of its first written demand, without NCAOR having to substantiate its demand, provided that in its demand the NCAOR will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee is valid until the _____ day of _____ 2014.

Signature of the bank

NATIONAL CENTRE FOR ANTARCTIC & OCEAN RESEARCH
 (Ministry of Earth Sciences, Govt. Of India)
 Headland Sada, Vasco-da-Gama GOA 403 804, INDIA
 Tel: 91- (0) 832 2525571 Telefax: 91- (0) 832 2525573
 Email: warlu62@ncaor.gov.in Website: www.ncaor.gov.in

GLOBAL TENDER

Director, National Centre for Antarctic & Ocean Research (NCAOR) invites sealed tenders in two-parts (part I – Technical bid & part II Financial bid) super scribing Tender No. Item and due date from well established/ reputed manufacturers / authorized and bonafide vendors for supply of the following:-

Sl. No.	Tender No.	Item Description	Qty.	Cost of Tender Doc.		EMD	
				₹	US\$	₹	US\$
1	NCAOR/HSS-017/PT-24	SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF X-RAY FLUORESCENCE SPECTROMETER	01	2000/-	50.00	1,00,000/-	1900.00
2	NCAOR/HSS-018/PT-25	SUPPLY, INSTALLATION, COMMISSIONING & TRAINING OF ELECTRON PROBE MICROANALYSER (EPMA)”	01	2000/-	50.00	1,00,000/-	1900.00

Last date for issue of tender documents : **25.08.2014**

Last date for submission of quotation : **26.08.2014**

The details of tender documents are also available in our website <http://www.ncaor.gov.in> and Central Public Procurement Portal <http://eprocure.gov.in>. Interested suppliers may download the details and submit the quotation on or before the due date along with tender fee.

The quotation without tender fee will not be considered.

Tender forms can be obtained from the Procurement section of NCAOR on all working days either by post or in person between 1000 – 1600 hours on payment of tender fees in the form of crossed Demand Draft payable at Vasco-da-gama only, from a Nationalized bank drawn in favor of **NCAOR** along with separate requisition indicating tender number and item. Tender forms can be obtained by speed post by remitting Rs. 50.00 by Indian bidders and US\$ 15.00 by Foreign bidders in addition to the cost of tender documents.

The Director, NCAOR is not responsible for any transitional/postal delays.

The quotations will be **opened on 27.08.2014** in the presence of tenderers or their authorized representatives.

The Director, NCAOR reserves the right to accept or reject any quotation in full or part thereof without assigning any reason.

Sd/-
For & on behalf of NCAOR