


 <b>Government eProcurement System</b>	<b>eProcurement System Government of India</b>			
	<b>Published Corrigendum Details</b>			
		Date : 16-Mar-2020 04:42 PM		
		 Print		
<b>Organisation Chain :</b>	Central Pollution Control Board  HO-Delhi - CPCB  Material - CPCB			
<b>Tender ID :</b>	2020_CPCB_538950_1			
<b>Tender Ref No :</b>	C-47011/ICB/02-04/2019-20/Mat			
<b>Tender Title :</b>	Supply of EDXRF Spectrometer, ICP-OES and Mercury Analyzer for CPCB Laboratories			
<b>Corrigendum Type :</b>	Date			
<b>Corrigendum:2</b>				
<b>Corrigendum Title</b>	<b>Corrigendum Description</b>	<b>Published Date</b>	<b>Document Name</b>	<b>Doc Size(in KB)</b>
Extension of Bid Submission End Date	Due to Administrative reasons, the Bid Submission end date is hereby extended upto 17.04.2020	16-Mar-2020 01:15 PM	amendments.pdf 	2542.24
<b>Critical Dates</b>				
<b>Publish Date</b>	24-Jan-2020 04:00 PM	<b>Bid Opening Date</b>	21-Apr-2020 03:00 PM	
<b>Document Download/Sale Start Date</b>	24-Jan-2020 04:00 PM	<b>Document Download/Sale End Date</b>	17-Apr-2020 05:00 PM	
<b>Clarification Start Date</b>	24-Jan-2020 04:00 PM	<b>Clarification End Date</b>	05-Feb-2020 05:00 PM	
<b>Bid Submission Start Date</b>	09-Mar-2020 10:00 AM	<b>Bid Submission End Date</b>	17-Apr-2020 05:00 PM	
<b>Pre Bid Meeting Date</b>	18-Feb-2020 11:00 AM			
<b>Corrigendum:1</b>				
<b>Corrigendum Title</b>	<b>Corrigendum Description</b>	<b>Published Date</b>	<b>Document Name</b>	<b>Doc Size(in KB)</b>
Revision of Bid Submission Start Date	Due to unavoidable delay, the bid submission start date is revised.	27-Feb-2020 03:59 PM	revision.pdf 	3327.04
<b>Critical Dates</b>				
<b>Publish Date</b>	24-Jan-2020 04:00 PM	<b>Bid Opening Date</b>	24-Mar-2020 03:00 PM	
<b>Document Download/Sale Start Date</b>	24-Jan-2020 04:00 PM	<b>Document Download/Sale End Date</b>	23-Mar-2020 03:00 PM	
<b>Clarification Start Date</b>	24-Jan-2020 04:00 PM	<b>Clarification End Date</b>	05-Feb-2020 05:00 PM	
<b>Bid Submission Start Date</b>	09-Mar-2020 10:00 AM	<b>Bid Submission End Date</b>	23-Mar-2020 03:00 PM	
<b>Pre Bid Meeting Date</b>	18-Feb-2020 11:00 AM			
<b>Details Before Corrigendum</b>				
<b>Critical Dates</b>				
<b>Publish Date</b>	24-Jan-2020 04:00 PM	<b>Bid Opening Date</b>	24-Mar-2020 03:00 PM	
<b>Document Download/Sale Start Date</b>	24-Jan-2020 04:00 PM	<b>Document Download/Sale End Date</b>	23-Mar-2020 03:00 PM	
<b>Clarification Start Date</b>	24-Jan-2020 04:00 PM	<b>Clarification End Date</b>	05-Feb-2020 05:00 PM	
<b>Bid Submission Start Date</b>	28-Feb-2020 10:00 AM	<b>Bid Submission End Date</b>	23-Mar-2020 03:00 PM	
<b>Pre Bid Meeting Date</b>	18-Feb-2020 11:00 AM			

## AMENDMENTS IN TECHNICAL SPECIFICATIONS OF INSTRUMENTS/EQUIPMENTS AFTER PRE-BID MEETING

### EQUIPMENT NAME: INDUCTIVELY COUPLED PLASMA- OPTICAL EMISSION SPECTROMETER (ICP-OES) - (ICB-03)

S. NO.	SPECIFICATIONS	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
1.1.1	AUTO SAMPLER AUTO DILUTION SYSTEM	One unit One unit	<i>Auto Sampler with Auto Dilution facility (One unit)</i>
2.1	SYSTEM	Thermostat at 15 °C or better with variation $\pm 0.5$ (Echelle –based or equivalent), start-up time of 30 min maximum from old/last start.	<i>Thermostat at -15 °C or better with variation <math>\pm 0.5</math>, (Echelle –based or equivalent) /Thermostat at a suitable temperature for maximum sensitivity.</i>  <i>Start-up time of 30-40min maximum from cold or last start up.</i>  <i>The bidder may submit undertaking which should be demonstrated as variation <math>\pm 0.5</math>, if they don't mention this specification in data sheet.</i>
2.3	STARTUP AND GAS CONSUMPTION	System should have the least warm up time. (Please mention time in minutes from switching off from main switch to the first sample aspiration).	<i>System should have the least warm up time. (Please mention time in minutes from switching off from main switch to the first sample aspiration).</i>
		Three replicates after the first aspiration with satisfactory repeatability to ensure stability of plasma and suitable warm up time.	<i>Three replicates after the first aspiration with satisfactory repeatability to ensure stability of plasma and suitable warm up time.</i>  <i>The bidder has to submit undertaking which should be demonstrated, if they don't mention this specification in data sheet.</i>
2.5.2	AUTO DILUTION SYSTEM	System should have automation technology for auto dilution which should enable standard preparation and prescribed sample dilution (constant dilution and user specified dilution)	<i>System should have automation technology for auto dilution which should enable standard preparation and prescribed sample dilution (constant dilution and user specified dilution)- Upto 50 times or better.</i>
2.5.3	PERISTALTIC PUMP	ICP system should have integrated Sample Introduction system with minimum four channels peristaltic pump with variable speed from 0.2 ml to 7ml per minute with 0.1 ml/min for maximum flexibility.	<i>ICP system should have integrated Sample Introduction system with minimum four channels peristaltic pump with variable speed from 0.2 ml to 7ml per minute with 0.1 ml/min for maximum flexibility.</i> <i>If the speed is not in ml per minute, it may be calculated and undertaking in this regard may be attached.</i>





S. NO.	SPECIFICATIONS	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
2.5.4	NEBULIZER/ CHAMBER SPRAY	Glass cyclonic chamber should be located at a thermally controlled area and equipped with temperature-controlled Peltier cooled spray chamber.	<i>Glass cyclonic chamber should be located at a thermally controlled area and equipped with temperature-controlled Peltier cooled spray chamber.</i>  <i>Nebulizer/ Spray Chamber should be easily accessible and demountable for cleaning purpose</i>
		Both cross flow with Scott spray chamber and concentric with cyclonic spray chamber should be provided.	<i>Both cross flow with spray chamber and concentric with cyclonic spray chamber should be provided.</i>
		Should be supplied with an extra set of high TDS & HF resistant nebulizer and spray chamber.	Point deleted from this heading.
2.6.1	GAS FLOW CONTROL	System should be equipped with MFC/Electronic flow controllers for precise control of variable gas flow rate with user selectable:  Plasma gas Flow: 0-20 L/min in 1 L/min increment.  Auxiliary gas Flow: 0-2 L/min in 0.1 L/min increment.  Nebulizer gas Flow: 0-2 L/min in 0.01 L/min increment or better.	<i>System should be equipped with MFC/Electronic flow controllers for precise control of variable gas flow rate with user selectable:</i>  <i>Plasma gas Flow: 8-20 L/min in 1 L/min increment.</i>  <i>Auxiliary gas Flow: 0-2 L/min in 0.1 L/min increment.</i>  <i>Nebulizer gas Flow: 0-1.5 L/min or better.</i>
2.6.2	PLASMA TORCH	Easily demountable Quartz Torch for plasma. The computer-controlled plasma torch adjustment /alignment for optimal analytical positioning relative to ion sampler interface.	<i>Easily demountable Quartz Torch for plasma. The computer-controlled plasma torch adjustment /alignment for optimal analytical positioning (Axial and radial window).</i>
2.6.4	RF SYSTEM	Suitable power wattage adjustable from 1000 Watt to 1350 watts or better in 1 watt increment with auto tuning.	<i>Suitable power wattage adjustable from 1000 Watt to 1350 watts in 10 watt increment or better with auto tuning without compromising any application desired in the tender. (Undertaking letter shall require with respect to demonstration of instrument with this power setting).</i>
2.6.7	SAFETY INTERLOCK	Monitoring and display of the shear gas pressure, plasma gas pressure, sample compartment, door closure, chillent flow, plasma stability, interlock status.	<i>Monitoring and display of the shear gas pressure (If required), plasma gas pressure, sample compartment, door closure, chillent flow, plasma stability, interlock status.</i>



S. NO.	SPECIFICATIONS	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
2.7	SPECTROMETER	<p>The instrument should be a bench top design with simultaneous reading of all elements. One with axial, Radial and mixed view or synchronous view in single run and single method.</p> <p>Whole wavelength range both (UV-Vis) should be stabilized and verified during analysis. Technology used to stabilize wavelength and verification of wave length should be mentioned.</p> <p>Instrument should be equipped with Charge Coupled device (CCD) Detector/equivalent or better.</p>	<p><i>The instrument should be a bench top design with simultaneous reading of all elements. One with axial, Radial and mixed view or synchronous view in single run and single method. Whole wavelength range both (UV-Vis) should be stabilized and verified during analysis. Technology used to stabilize wavelength and verification of wave length should be mentioned. Instrument should be equipped with Charge Coupled device (CCD) Detector/equivalent or better.</i></p>
		The spectrometer must cover full spectral range from 165-800 nm or better.	<i>The spectrometer must cover full spectral range from 167-785 nm or better.</i>
2.8	DEVICE INSTRUMENT/ SOFTWARE AND APPLICATION SOFTWARE FOR COMPOSITION ANALYSIS	<p>The application platform/data handling software must be facilitate for:</p> <ul style="list-style-type: none"> <li>• Programme facility with multitasking software displaying method sample and analysis status.</li> <li>• Instrument control reintegration/report, multi-level calibration, automatic data acquisition and processing.</li> <li>• Calculation of data and flexibility in report formatting.</li> <li>• Correction methods including intensity calculation drift correction, Blank Correction, internal standard correction and overlap correction.</li> <li>• Measurement of transient signals, self-diagnosis, remote diagnostics and LAN connectivity.</li> <li>• Quality control protocols including preparation blanks, multiple quality control standards calibration, check samples, spike recoveries, duplicates calibration failure and QC limits.</li> <li>• Storage of complete spectrum of elements for future reference.</li> <li>• Provision for statistical analysis, printer/plotter function.</li> <li>• Standard additions methods, addition calibration.</li> </ul>	<p><i>The application platform/data handling software must be facilitate for:</i></p> <ul style="list-style-type: none"> <li>• <i>Programme facility with multitasking software displaying method sample and analysis status.</i></li> <li>• <i>Instrument control reintegration/report, multi-level calibration, automatic data acquisition and processing.</i></li> <li>• <i>Calculation of data and flexibility in report formatting.</i></li> <li>• <i>Correction methods including intensity calculation drift correction, Blank Correction, internal standard correction and overlap correction.</i></li> <li>• <i>Measurement of transient signals, self-diagnosis, remote diagnostics and LAN connectivity.</i></li> <li>• <i>Quality control protocols including preparation blanks, multiple quality control standards, calibration, check samples, spike recoveries, duplicates calibration failure and QC limits.</i></li> <li>• <i>Storage of complete spectrum of elements for future reference.</i></li> <li>• <i>Provision for statistical analysis, printer/plotter function.</i></li> <li>• <i>Standard additions methods, addition calibration.</i></li> <li>• <i>Software should control any third-party accessory like automation, auto sampler etc.</i></li> </ul>
2.8.1	QUALITY CONTROL SUPPORT	Supplier should provide Certificate on Installation Qualification (IQ), Performance Qualification (PQ) & Operational Qualification (OQ) during the installation of the instrument. The activity should cover limit of detection and limit of quantification.	<p><i>Supplier should provide Certificate on Installation Qualification (IQ) &amp; Operational Qualification (OQ) and will assist for Performance Qualification (PQ) during the installation of the instrument. The activity should cover limit of quantification atleast 5 times lower with respect to limit of IS 10500 regulation, which needs to be demonstrated by vendors.</i></p>
3.0	OTHER POINTS	The successful bidder shall give an undertaking that the spares must be made available for at least 10 years from the date of installation and commissioning.	The successful bidder shall give an undertaking that the spares must be made available for at least 7 years from the date of obsolete the quoted model.



S. NO.	SPECIFICATIONS	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
		The technically qualified L1 (lowest one) Bidder may satisfactorily demonstrate the suitability of the instrument offered by them for analytical purpose specified in the tender documents by analysing the samples provided by CPCB as part of tender evaluation process. Evaluation criteria may depend upon the satisfaction of intender in connection to the specified limit of the instrument during demonstration of quoted model.	<i>Technical bids will be evaluated on the basis of information and data provided in the bids as well as the actual performance of the equipment/ instruments being offered. Technical bids of the Bidders, who fulfil technical qualification criteria, shall be evaluated first in terms of requirements/specifications as per the tender document. If the details/data given in the technical bids are found in conformity with the technical specification, testing of the models offered by the Bidders may be carried out, only wherever found necessary, by the CPCB to ascertain the actual performance of the equipment/ instrument and shall not be considered in case of unsatisfactory performance. Bidder will arrange, at his cost, the demonstration of the equipment/ instruments.</i>
3.0.1	INSTALLATION IN INDIA	The company must have three or more successful installation in India.	<i>In case, the quoted model is new launched, the Bidder shall furnish certificate of immediate lower model having the similar specifications to quoted model with undertaking. Certificate will not be accepted for other models.</i>
3.1.3	METHODOLOGY PACKAGE	Comprehensive EPA, APHA, ASTM, European, ISO, BIS or equivalent methodology package software for environmental application.	<i>Comprehensive EPA, APHA, ASTM, European, ISO, BIS or equivalent methodology package software for environmental application.  (Undertaking is required for method in software will be as per asked regulation.)</i>
3.1.9	OTHER CONSUMABLES	For five years operation  <ul style="list-style-type: none"> <li>• Plasma Torch Organic-02 Pcs.</li> <li>• Injector- 02 Pcs.</li> </ul>	<ol style="list-style-type: none"> <li>1. Plasma Torch Aqueous (5 Nos) , Organic (3Nos),</li> <li>2. Injector Aqueous (3 Nos), Organic (2 Nos),</li> <li>3. Nebulizer Aqueous (3 Nos) Organic (2 Nos),</li> <li>4. Pump Tube:-Drain (20 Nos)</li> <li>5. Auto sampler tube &amp; probe (5 -5 Nos),</li> <li>6. Auto dilutor System tube (5 Nos),</li> <li>7. RF coil (2 Nos),</li> <li>8. Plasma plume cutting accessory (2 Nos) if require.</li> <li>9. Gasket 10 Nos. if require.</li> </ol>
		Multielement NIST Certified Reference Material (CRM) standard solution of 100 mg/L or 1000 mg/L concentration with self-life of minimum 2 years, having minimum 30 elements of environmental significance i.e. Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Se, Sr, Te, Tl, U, V & Zn.	Multielement NIST Certified Reference Material (CRM) standard solution of 100 mg/L or 1000 mg/L concentration with self-life of minimum 2 years, having minimum 30 elements of environmental significance i.e. Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, Li, Mg, Mn, Mo, Na, Ni, Pb, Rb, Se, Sr, Te, Tl, U, V & Zn.
		1000 vials of 14-15 ml and 200 vials of 50 ml capacity should be supplied along with	<i>1000 vials of 14-15 ml and 200 vials of 50 ml capacity or as applicable with the auto sampler</i>



S. NO.	SPECIFICATIONS	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
		the instruments.	<i>should be supplied along with the instruments.</i>
4.0.3		<p>Four Argon, two Oxygen and two Nitrogen gas cylinders (as required). High pressure seamless steel cylinder filled with High purity 99.999% Argon gas, Oxygen and another Nitrogen gas with having gas capacity 7m3 water capacity 47 litres, cylinders should be ISI marked, conforming to IS:7285. Specification, flat bottom fitted with valve as per IS:3224, complete with neck ring and cap, painted as specified under Gas Cylinders Rules, 1981 along with Hydraulic test certificate, ISI Inspection / Test certificate, Explosive certificate from Chief Controller of Explosives, Nagpur India as per BIS Standard with 47 liter cylinder:</p> <p>Argon – Four cylinder filled Oxygen-Two cylinder filled Nitrogen – Two cylinder filled (if required).</p>	<p><i>Four Argon, two oxygen and two Nitrogen gas cylinders (if required). High pressure seamless steel cylinder filled with High purity 99.999% Argon gas, Oxygen and another Nitrogen gas with having gas capacity 7m3 water capacity 47 litres, cylinders should be ISI marked, conforming to IS:7285. Specification, flat bottom fitted with valve as per IS:3224, complete with neck ring and cap, painted as specified under Gas Cylinders Rules, 1981 along with Hydraulic test certificate, ISI Inspection / Test certificate, Explosive certificate from Chief Controller of Explosives, Nagpur India as per BIS Standard with 47 liter cylinder:</i></p> <p><i>Argon – Four cylinder filled</i> <i>Oxygen-Two cylinder filled</i> <i>Nitrogen – Two cylinder filled (if required).</i></p>
4.0.4	AIR COMPRESSOR (IF REQUIRED)	Noise free, oil free, less vibration imported air compressor with auto-cut device maximum pressure up to 160 psi or 11 bar (if required) or compatible to the instrument.	<i>Noise free, oil free, less vibration imported air compressor with auto-cut device maximum pressure up to 160 psi or 11 bar (if required) or compatible to the instrument.</i>
6.0		One week informal on-site training on the use and operation of the instrument completion of successful installation followed by compulsory (all expenditure inclusive) one week training to two scientists on software training, operation, maintenance and trouble-shooting aspects of instrument at manufacture's application laboratory abroad.	<p><i>Compulsory one week informal on-site training to two scientists per instrument (all expenditure inclusive), after completion of successful installation on software, operation, maintenance and trouble-shooting aspects of instrument at manufacture's site laboratory.</i></p> <p><i>Bidder should specify the place of training.</i></p>
7.0	OPTIONAL	The vendor should provide all the consumable parts as optional item required for smooth functioning of the instrument under the real environmental conditions at least for five years trouble free operation.	Point deleted.
8.0		Bidders shall invariably furnish documentary evidence (Brochure/ catalogue, client's certificate – at least three) in support of the satisfactory operation of the equipment as specified above.	<p><i>Bidders shall invariably furnish documentary evidence (Brochure/ catalogue, client's certificate – at least three) in support of the satisfactory operation of the equipment as specified above. In case, the quoted model is new launched, the Bidder shall furnish certificate of immediate lower model having the similar specifications to quoted model with undertaking. Certificate will not be accepted for other models.</i></p>



		<p>Compliance of specifications shall be authenticated by the manufacturer point by point.</p> <p>The technically qualified lowest (L1) bidder will have to satisfactorily demonstrate the suitability of the equipment for air filter application by analysing the samples provided by CPCB as a part of tender evaluation process. Evaluation criteria may depend upon demonstration of quoted instrument.</p>	<p><i>Compliance of specifications shall be authenticated by the manufacturer point by point.</i></p> <p><i>Technical bids will be evaluated on the basis of information and data provided in the bids as well as the actual performance of the equipment/ instruments being offered. Technical bids of the Bidders, who fulfil technical qualification criteria, shall be evaluated first in terms of requirements/specifications as per the tender document. If the details/data given in the technical bids are found in conformity with the technical specification, testing of the models offered by the Bidders may be carried out, only wherever found necessary, by the CPCB to ascertain the actual performance of the equipment/ instrument and shall not be considered in case of unsatisfactory performance. Bidder will arrange, at his cost, the demonstration of the equipment/ instruments.</i></p>
24.0	Training, Warranty and AMC	<p>One week informal on-site training on the use and operation of the instrument completion of installation followed by compulsory (all expenditure inclusive) one week training to two scientists per instrument on software training, operation, maintenance and trouble-shooting aspects of instrument at manufacture's application laboratory abroad</p>	<p>Compulsory one week informal on-site training to two scientists per instrument (all expenditure inclusive), after completion of successful installation on software, operation, maintenance and trouble-shooting aspects of instrument at manufacture's site laboratory. Bidder should specify the place of training.</p>

## AMENDMENTS IN TECHNICAL SPECIFICATIONS OF INSTRUMENTS/EQUIPMENTS AFTER PRE-BID MEETING

### NAME: ENERGY DISPERSIVE X-RAY FLUORESCENCE (EDXRF) SPECTROMETER SYSTEM (ICB-02)

SR. NO.	SPECIFICATION	REQUIREMENT AS PER ORIGINAL TENDER	AMENDED / FINAL SPECIFICATION
3.3	General Requirements	No-objection certificate (NOC) or Type approval from Atomic Energy Regulatory Board (AERB) of India should be submitted for the Equipment / Instruments deploying radiation source or as applicable, along with the Technical Bid. Alternately, the NOC or Type approval certificates must be submitted within 30 days from the date of opening of the technical bids of the tender.	<i>No-objection certificate (NOC) or Type approval from Atomic Energy Regulatory Board (AERQ) of India should be submitted for the Equipment / Instruments deploying radiation source or as applicable, along with the Technical Bid. Alternately, the bidder shall assist CPCB to obtain the NOC from AERB.</i>
4.0	Element detection Range	Fluorine to Uranium	<i>Fluorine to Uranium</i>
5.0	Excitation Source/ probe beam	Direct or polarized type is acceptable with computer controlled secondary target system or beam transmission filters. The system should be provided with an X ray generator of suitable capacity to power a X-Ray tube with Rhodium or Silver or Pd/Co Anode material to excite all element from F to U.	<i>Direct or polarized type is acceptable with computer controlled secondary target system or beam transmission filters. The system should be provided with an X ray generator of suitable capacity to power a X-Ray tube with Rhodium or Silver or Pd/Co Anode material to excite all element from F to U. For polarized type excitation source, power source should be &gt;200 watt.</i>
8.2	Quality Control Support	Supplier should provide Certificate on Installation Qualification (IQ), Performance Qualification (PQ) & Operational Qualification (OQ) during the installation of the instrument. The activity should cover limit of detection and limit of quantification.	<i>Supplier should provide Certificate on Installation Qualification (IQ) &amp; Operational Qualification (OQ) and will extend their support to verify Performance Qualification (PQ) during the installation of the instrument. The activity should cover limit of detection and limit of quantification.</i>
10.0	Sample changer	Minimum 10 position automatic sample changer with facility for individual spinning for improved statistics for unattended operation.	<i>Minimum 10 position automatic sample changer with facility for individual spinning for improved statistics for unattended operation.</i>
20.0	Other points	The successful bidder shall give an undertaken that the spares must be made available for atleast 10 years from the date of installation and commissioning.	<i>The successful bidder shall give an undertaken that the spares must be made available for atleast 10 years from the date of installation and commissioning.</i>