MISSISSIPPI STATE DEPARTMENT OF HEALTH

REQUEST FOR QUOTES-FORMAL (RFQF)
REVERSE AUCTION
RFx # 3140001669

The Mississippi State Department of Health will purchase one (1) Simultaneous Inductively Coupled Plasma- Optical Emission Spectroscopy (ICP-OES) Instrument to test drinking water samples using the Environmental Protection Agency (EPA) standard method 200.7 and invites your participation in accordance with the terms and conditions of this RFQF Reverse Auction. Once award of the bid has been made, the terms and conditions as set forth in this RFQF Reverse Auction shall become a contract binding on the successful bidder. Any documents submitted to satisfy a requirement of this request and any assurances made by the successful bidder in satisfaction of this request shall become a part of the agreement between the Mississippi State Department of Health and the successful bidder. The Mississippi State Department of Health shall have the right to rely upon the documents and assurances submitted by the successful bidder.

This RFQF Reverse Auction is a one-time instrument purchase for an ICP-OES. The successful bidder must meet all of the attached instrument specifications.

E-Verify Compliance - Contractor/Seller represent and warrants that it will ensure its compliance with the Mississippi Employment Protection Act (Senate Bill 2988 from the 2008 Regular Legislative Session) and will register and participate in the status verification system for all newly hired employees. The term "employee" as used herein means any person that is hired to perform work within the State of Mississippi. As used herein "status verification system" means the Illegal Immigration Reform and Immigration Responsibility Act of 1996 that is operated by the United States Department of Homeland Security, also known as the E-Verify Program, or any other successor electronic verification system replacing the E-Verify Program. Contractor/Seller agrees to maintain records of such compliance and , upon request of the State, to provide a copy of each such verification to the State. Contractor/Seller further represents and warrants that any person assigned to perform services hereunder meets the employment eligibility requirements of all immigration laws of the State of Mississippi. Contractor/Seller understands and agrees that any breach of these warranties may subject Contract/Seller to the following: (a) termination of this Agreement and Ineligibility for any state or public contract in Mississippi for up to three (3) years, with notice of such (b) the loss of any license, permit, certification or other document granted to Contractor/Seller by an agency, department or governmental entity for the right to do business in Mississippi for up to one (1) year, or (c) both.

In the event of such termination/cancellation, Contractor/Seller would also be liable for any additional costs incurred by the State due to contract cancellation or loss of license or permit.

E-Payments – Payments by the Mississippi State Department of Health shall be made and remittance information provided electronically as directed by the State of Mississippi. These payments shall be deposited into the bank account of the Contractor's choice. The state may, at its sole discretion, require the Contractor to submit invoices and supporting documentation electronically at any time during the terms of this agreement. Contractor understands and agrees that the State is exempt from the payment of taxes. All payments shall be in United States currency.

Applicable Law – This purchase(s) shall be governed by and construed in accordance with the laws of the State of Mississippi, excluding its conflicts of law provisions, and any litigation with respect thereto shall be brought in the courts of the State of Mississippi. The vendor shall comply with applicable federal, state and local laws and regulations.

Payment Terms – MS Code Section 31-7-305(3) allows a state entity to pay invoices within 45 days without penalty.

Bid terms are welcome, however, they will not be used as criteria for awarding the bid.

Items will be purchased from the RFQF Reverse Auction by the Mississippi State Department of Health in accordance with the terms and conditions set out in this request and the attachments hereto.

State and Federal law requires that the Mississippi State Department of Health not be liable should federal or state funds not be available to make the purchases. Should federal or state funds be reduced or eliminated, the State of Mississippi, the Mississippi State Department of Health, its agents, servants and employees would have no obligation to purchase any quantity of goods or services covered by this request for bid. The bidder agrees to hold the above enumerated entities and individuals harmless in that event.

The bidder/prospective vendor must further give assurances in writing that it can provide and deliver the items as ordered on a schedule agreeable to the Mississippi State Department of Health. The contractor shall not assign, sell or subcontract in whole or in part, its rights or obligations under this agreement without prior written consent of the MSDH. Any attempt assignment or sale of the contract without said consent shall be void and of no-effect.

The MSDH reserves the right to refuse any items not meeting the specifications of this bid.

Prospective bidders are to contact Jennifer Dotson, Purchasing Director in writing if there are any questions regarding this RFQF Reverse Auction, either by email jennifer.dotson@msdh.ms.gov or by writing to P. O. Box 1700, Jackson, MS 39215-1700. Questions should be received no later than the close of business on Wednesday, January 30, 2019.

Sealed quotes/responses will be accepted/received until 3:00 PM, CST, Thursday, February 7, 2019 either hand delivered or by mail to **Mississippi State Department of Health, Purchasing Department, Room 137A, The Underwood Building, 570 E. Woodrow Wilson, Jackson, Mississippi 39216 or Post Office Box 1700, Jackson, MS 39215-1700**. The quotes/responses

must be received before and be dated and time stamped by the submission deadline. All bids must be properly stamped. No quotes/responses will be accepted after the established submission deadline.

No facsimile (FAX) quotes/responses will be accepted.

Quote/response BID FORM must be signed by a person with authority to bind the bidder, and must accompany your submission. Failure to comply with this provision, any other provision of this RFQF Reverse Auction, or any provision of state or federal law or regulation regarding the submission of bids will cause the bid to be rejected.

In addition, bidders should also submit a quote/response on-line in the State of Mississippi electronic procurement system, MAGIC. In order to submit quotes/responses, bidders must be registered as a vendor in MAGIC system and have an I.D. number and password assigned at the time of registration. Help for registering in MAGIC can be found at www.mmrs.state.ms.us.

The Mississippi State Department of Health reserves the right to waive minor informalities, which are matters of form rather than substance, or insignificant mistakes or to allow the bidder to correct them if other bidders are not prejudiced.

Award will be made only after approval by the Public Procurement Review Board of the Department of Finance and Administration, Office of the Governor.

The bid will be awarded to the lowest and best responder/participant of this RFQF Reverse Auction as determined by the agency. The awardee will perform the terms and conditions of the bid and any contract awarded hereunder. No assignment of subcontracting of the award or any contract awarded there under shall be allowed without prior written approval of the State Health Officer.

PLEASE MARK YOUR ENVELOPES EXTERNALLY:

RFx #3140001669 Submission Deadline: 3:00 PM, CST, February 7, 2019

Minimum Bid Specifications to purchase a Simultaneous Inductively Coupled Plasma-Optical Emission Spectroscopy (ICP-OES) Instrument

The MPHL performs analytical analysis daily on drinking water samples received from public water systems for compliance monitoring purposes. The purpose of the ICP-OES instrument is to detect trace elements such as Sodium and Manganese in drinking water using the Environmental Protection Agency (EPA) standard method 200.7. The purpose of this RFP is to solicit proposals and enter into a contract between the successful vendor and the MPHL for the purchase of one (1) Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES) based on the below specifications:

GENERAL SPECIFICATIONS:

1. The instrument **must** be new and a model currently in production. Refurbished or demonstrator instruments are not acceptable.
2. The instrument must be able to perform simultaneous multi-element determination while adhering to all the requirements and detection limits stated in EPA methods 200.7
3. Vendors must confirm that all essential spare parts of the quoted system shall be available for a minimum period of 10 years from the date of supply of the bid.
4. The vendor must submit with their response a pre-installation checklist which shall identify any specific requirements needed for operation of the instrument and peripherals including but not limited to, voltage, circuit breakers, surge protectors, exhaust requirements, cooling requirements, space requirements and argon purity, flow and pressure
5. A UPS battery back-up/surge protector must be included.
6. The vendor must provide a list of at least 5 current clients that use their instrument. Client estimated testing volume and test list must be included.
7. The vendor is responsible for Packing, Forwarding, Freight & Insurance, Delivery at site, Commissioning and Training in a satisfactory manner without undue delay.

SPECIFICATIONS FOR A SIMULTANEOUS ICP-OES SPECTROMETER SPECTROMETER:

1. The instrument **must** be a simultaneous ICP-OES (sample introduction system, RF induced plasma emission source, purged Echelle polychrometer, Charge Injection Device (CID) detector, data acquisition, instrument control electronics) using a solid-state detector technology.
2. The instrument's entire optical system must be enclosed in a purged and thermostated optical enclosure.
3. The instrument must cover the spectral range from 190-782 nm.
4. The detector **must** have anti-blooming protection on each pixel.
5.. Argon must be used as purge gas and the gas flow **must** be controlled by the system controller.
6. Any other gas required for the operation of the system must be stated.
7. Gas flow for the polychromator purge **must** be Mass Flow Controlled.
8. The instrument **must** not require or include a shutter with Mercury or Neon recalibration system to monitor system conditions and ensure optical stability.
9. The instrument **must** have a vertical plasma and the standard torch must be of a single-piece design.
10. Optional semi demountable torches **must** be available.

11. Viewing of the plasma height **must** be computer controlled.
12. The system **must** have the ability view at least 96% of the emission spectra between 190 and 782nm.
13. The instrument **must** be able to simultaneously perform determinations across the entire spectrum, both UV and visible.
14. The instrument **must** be able to simultaneously determine all desired elements in one analytical reading.
15. The system must be able to produce at least 100 samples results per day.

ICP SYSTEM:
1. The vertical plasma **must** be 'dual view' with the option to read axially and radially in a 2-step sequential process or to read axial or radial views alone.
2. The vertical dual view system **must** be upgradable to allow synchronous reading of axial and radial at the same time.
3. The instrument **must** monitor gas pressures and flows, water flows, air pressure, exhaust air flow and plasma stability. The system **must** have interlocks around the plasma compartment door and also the torch loader and the interlocks must be continuously monitored and if any interlock is interrupted, the plasma is shutdown automatically.
4. Plasma ignition and shut down **must** be computer controlled and totally automated.
5. The instrument **must** include and on-board fan to supply air to the system, and maintain a positive pressure environment within the instrument enclosure.
6. All connections including gases, cooling water, power and communications should be accessed from the sides of the instrument, rather than the rear of the instrument, for easy maintenance and servicing.

SYSTEM DETECTOR:
1. The instrument **must** utilize a single focal plane with two (2) solid-state detectors that is optimized for performance across the entire emission spectrum possible on the spectrometer.
2. All emission wavelengths need to be read simultaneously.
3. Each detector pixel **must** have anti-blooming protection to enable the simultaneous measurement of trace level analytes in the presence of major matrix constituents.
4. The detector **must** be cooled by a Peltier device to a temperature of at least -40°C to minimize detector dark current thereby enhancing instrument performance and detection limits.
5. The detector **must** have Adaptive Integration technology that allows intense and trace signals to be measured simultaneously and at the optimum Signal to Background Ratio (SBR).
6. The detector **must** be hermetically sealed and require argon gas consumption for detector purging.

RF GENERATOR:
1. The RF generator **must** be solid state and have an optimal power output range of 700 - 1500 watts and be computer controllable in 10-watt increments.
2. The RF generator **must** be of free running design and have power transfer efficiency into the plasma of at least 75%, to eliminate the need of inefficient secondary matching networks.
3. The power output stability **must** be better than 0.1%.

FLOW CONTROLS:

1. All gas flows to control the plasma should have Mass Flow Controllers on them. This includes the plasma gas (coolant), auxiliary gas, nebulizer gas and make up gas
2. Plasma argon gas (coolant) flow **must** be controlled at flows ranging from 8.0-20.0 L/min at 0.1L/min increments.
3. Auxiliary gas flow **must** be controlled at flows ranging from 0-2.0L/min at increments of 0.01L/min.
4. The nebulizer argon flow **must** be controlled from 0 – 1.5 L/min in 0.01 L/min increments.
5. The makeup gas should have flow from 0-2L/min in 0.01L/min increments.

SAMPLE INTRODUCTION SYSTEM:

1. The torch **must** be a cassette style torch that is mounted vertically. After mounting the torch, no further manual adjustment of the torch is required for alignment to the RF coil or for axial optical alignment, or for adjustment of the position of the injector tube.
2. The instrument **must** include a double pass glass cyclonic spray chamber and a glass concentric nebulizer.
3. The system **must** be able to accommodate commercially available, specialty nebulizers and spray chambers manufactured by third parties for maximum analytical flexibility.
4. The system **must** include a three channel, variable speed, computer controlled peristaltic pump which allows for on-line addition of internal standards.
5. Peristaltic pump **must** be capable of operating at 80 rpm (fast pump) for rapid uptake and washout.
6. The system **must** include the option of a 5-channel pump and switching valve system for improving sample introduction and washout efficiency.

INSTRUMENT CONTROLLER:

1. The instrument controller **must** be a minimum of an industry standard Intel 3GHz processor, 8 MB cache, 4 GB RAM.
2. The computer **must** have a hard disk that will hold at least 500 Gbytes of information at 7200RPM 6G/s
3. The computer **must** include at least 16 x DVD +/- RW drive with an integrated sound card
4. The PC **must** have at least two USB ports and one serial (RS232) port.
5. The computer **must** have a minimum of a 24" flat panel LED color monitor, keyboard, optical mouse with pad and laserjet printer.
6. The computer **must** have Windows 10 64-bit operating system loaded.

SOFTWARE:

1. The instrument controlling software **must** be 64-bit running under Microsoft Windows 10.
2. The instrument shall have the ability to easily export results in a file format compatible to any LIMS and allow the import of sample numbers from a LIMS system to quickly generate an analysis table.
3. The software **must** be able to display calibration curves for all of the elements analyzed simultaneously.
4. The software **must** be able to display all of the peaks from an analysis simultaneously.
5. The software must provide automated background correction, whereby the user does not need to decide upon suitable background points for background correction.

6. The software **must** have the ability to do spectral interference correction. Traditional Interfering Element Corrections (IEC) **must** be available and the system must be able to calculate these values automatically.
7. IEC factors **must** recalculate automatically when background correction points are changed eliminating the need to recollect the IEC data.
8. The system **must** be able to apply spectral interference correction in addition to background correction post sample analysis, eliminating the need to reanalyze the sample thus increasing productivity.
9. The software **must** allow for four different types of predefined check standards which may be customized by the instrument user. If samples are found to fall out of these ranges, user defined corrective actions including recalibration and rerunning of samples must be available.
10. Additional QC capability **must** include at least three types of blank checks, multiple sample calculations including duplicates and dilution calculations and multiple spike calculations.
11. The instrument **must** be able to read both background and emission data simultaneously and allow for manual or automatic background correction.
12. All raw data **must** be saved and the system **must** allow for post run reprocessing of the data including the changing of background correction points, standard values, curve-fit technique, and individual replicate editing.
13. Calibration curves **must** be stored and be able to be recalled for later use.
14. The instrument software must have a matrix specific database which provides wavelength selection, along with the automatic addition of elements required for interference correction for EPA method 200.7
15. Calibration equations **must** include linear, quadratic and rational and include functions of weighted fit and force through blank options.
16. The software **must** allow for at least 50 calibration standards and blanks.

AUTOSAMPLER:
1. The autosampler must be fully integrated by computer control into the operation of the ICP.
2. The autosampler **must** have total random access capabilities and hold at least 180, 15 ml samples and 11 standard vials. The test tube racks **must** also be included.

PERFORMANCE:
1. The instrument **must** meet all EPA Method 200.7 detection limit requirements
2. The instrument **must** have analytical linearity in excess of 5-6 orders of magnitude with the ability to use alternate wavelengths that are measured simultaneously.

SERVICE:
1. Must provide a toll free telephone number for technical assistance that is accessible Monday through Friday from 8:00 a.m. - 5:00 p.m. CST/CDT.
2. The company must be able to provide expedited service when there is an instrument malfunction. Vendor must provide response time in documents that are submitted.
3. Must provide the base location of the nearest service representative.
4. Must provide on-site service calls to perform preventive maintenance as required by the manufacturer.

5. The manufacturer shall provide optional support agreements (service contracts) for the instrument and software. A summary of the support agreement options and cost for each option shall be attached for review, but not included in the purchase price.
6. The instrument and all essential accessories (except consumables) shall be supported by at least a 1-year warranty that includes all parts, labor and travel.

TRAINING:

1. On-site comprehensive training for scientific/technical personnel operating the system and support services till customer satisfaction with the system must be provided and line-listed in the instrument price submitted.
2. Complementary (all expenditure inclusive) comprehensive training for two personnel on operation and maintenance aspect of the instrument at manufacturer's must be provided and line-listed in the instrument price submitted.

OTHER:

1. A list of consumables for one (1) year operation of the system for main ICP unit, spare torches, tubing, nebulizer, moisture trap, etc. , as required with pricing must be provided to estimate long term costs.
2. Available service agreement plans for the instrument after the warranty ends must be provided along with pricing to estimate long term costs.