State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER	PAGE
DEP15345	1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
CHUCK BOWMAN
304-558-2157

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
ENVIRONMENTAL PROTECTION
DEPARTMENT OF
OFFICE OF AIR QUALITY
601 57TH STREET
CHARLESTON, WV
25304 304-926-3647

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
03/10/2011				

BID OPENING DATE: 03/23/2011 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
				ADDENDUM NO.1		
				ADDENDUM ISSUED FOR THE INDUCED COUPLED PLASMA-MASS SPECTROMETER TO DISTRIBUTE THE FOLLOWING REVISED SPECIFICATIONS. PLEASE REPLACE THE ORIGINAL SIX(6) PAGES OF SPECIFICATIONS WITH THE ATTACHED SIX(6) PAGES.		
				BID OPENING DATE AND TIME ARE EXTENDED FROM 03/17/2011 TO 03/23/2011 AT 1:30 PM.		
				********** NO OTHER CHANGES **********		
0001	1	EA	493-04	INDUCED COUPLED PLASMA-MASS SPECTROMETER	_____	_____
				****** THIS IS THE END OF RFQ DEP15345 ****** TOTAL:		_____

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE

TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

1. Awards will be made in the best interest of the State of West Virginia.

2. The State may accept or reject in part, or in whole, any bid.

3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.

5. Payment may only be made after the delivery and acceptance of goods or services.

6. Interest may be paid for late payment in accordance with the ***West Virginia Code***.

7. Vendor preference will be granted upon written request in accordance with the ***West Virginia Code***.

8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

10. The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern the purchasing process.

11. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.

12. BANKRUPTCY: In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

13. HIPAA BUSINESS ASSOCIATE ADDENDUM: The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at **www.state.wv.us/admin/purchase/vrc/hipaa.htm** and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

14. CONFIDENTIALITY: The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

15. LICENSING: Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

16. ANTITRUST: In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.

2. Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.

3. Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

5. Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

DEP15345
Revised Specifications
Inductively Coupled Plasma Mass Spectrometer

A. General System Specifications:

1. System shall include or be equivalent to, the following: liquid sample introduction system, RF plasma ion source, quadrupole based cell to eliminate spectroscopic interferences using either non-reactive collision gases or pure reaction gases such as ammonia and oxygen, quadrupole ion deflector, simultaneous dual stage discrete dynode detector and a cone interface, all under computer control.

2. Fully automated system startup, shutdown and optimization and computer controlled instrument tuning for optimum performance.

3. Quadrupole shall be able to scan a minimum of 5000 amu/sec to achieve maximum productivity from transient signals when jumping between light masses and high masses.

4. Quadrupole resolution settings are dynamically scanned as each element is analyzed.

5. High mass range shall be at least 238 amu or greater.

6. All analytical system operations from component optimization to methods development to calibration to analysis to reports shall be able to be performed using a single software program.

7. Full system shall use single-phase power and remains in specification as laboratory temperature varies 10 to 35°C at up to 2°C per hour.

8. System shall be able to be sufficiently cooled in laboratory temperatures below 30°C.

9. System shall be fully compliant with US EPA Compendium Method IO-3.5 and Federal Equivalent Method (EQL-0710-192) titled: *Heated Nitric Acid Hot Block Digestion and ICP/Ms Analysis For Lead (Pb) On TSP High-Volume Filters.*

10. ICP-MS system shall have a full color plasma view window for useful visuals on the sampler cone, plasma color and injector tip.

11. Unit shall be a bench top design.

12. System should only require minimum periodic maintenance, cleaning or replacement of collision, collision/reaction or universal cell and main filtering quadrupole for the system's lifetime by the user or the manufacturer's service engineers.

B. Sample Introduction System Shall Include:

13. For general sample workload, low flow (0.25 ml/minute) sample introduction system with no o-rings: concentric nebulizer, cyclonic spray chamber, and quartz injector.

14. Waste saving low flow uptake nebulizer, designed to handle user defined applications.

15. Close coupled, three-channel integral peristaltic pump, computer controlled, shall be integrated within the ICP-MS system.

16. Design where components are mounted outside the torch enclosure to eliminate the need for extraneous spray chamber cooling hardware and for easy access of alternate components and accessible from the front of the instrument. To this end the sample introduction components shall be accessible from the front of the instrument.

17. Cassette style torch mount or equivalent, where entire torch and injector assembly can be easily removed.

18. Fully automated one touch X, Y, Z torch alignment.

C. Ion Source and RF Plasma System Shall Include:

19. Computer controlled RF generator operating from 500 to 1600 watts for automatic control of torch ignition, shutdown, and system warm up.

20. Design where the RF Generator and load coil do not require water cooling.

21. The RF Generator which does not require an impedance matching network and providing for adaptation to any change in plasma impedance within 50 nanoseconds.

22. The RF generator which electrically decouples the plasma from the ion optics and allows independent adjustment of the ion optic parameters and the plasma conditions.

D. Plasma Interface Shall Include:

23. A cone design, or equivalent, consisting of at least a sampler and skimmer cone with all cones at ground potential.

24. An extraction lens system, or equivalent, that does not create higher background values for elements such as Li, B, K, Na Ni and Pt.

25. Standard large orifice sampling and skimmer cones .

26. Design with rapid mounting and removal cone design, easily accessible from the front of the instrument.

27. A quadrupole ion deflector for complete separation of ions from photons and neutrals into the cell. The cell and mass analyzing quadrupole shall be completely maintenance free.

E. Quadrupole Mass Analyzer Assembly Shall Meet the Following:

28. The quadrupole mass filter shall utilize gold metalized ceramic rod technology or equivalent, for best stability and operate at 2.5 MHz for exceptional resolution and abundance sensitivity.

29. The quadrupole shall:
    a. Be able to scan up to 5000 amu per second
    b. Operate with dwell times as short as 0.1 ms
    c. Operate with Peak hop settling time < 0.2 ms regardless of mass change
    d. Operate with peak hop slew speeds up to 1.6M amu/sec

30. Stability of the quadrupole mass calibration and resolution shall be maintained by having critical parts of the quadrupole power supply temperature controlled. In this configuration, the quadrupole power supply will be unaffected by fluctuations in laboratory temperature.

31. The analyzer quadrupole shall have the ability to discretely control the resolution of selected mass regions dynamically, without affecting the overall nominal resolution of the system.

F. Ion Detector Assembly Shall Meet the Following:

32. The ion detector shall be a simultaneous dual-stage discrete dynode electron multiplier, and offer protection against overload in both pulse counting and analog modes. The detector shall:
    a. Provide a dead time < 35 ns
    b. Provide switching between pulse or analog in < 0.2 ms
    c. Provide transient data acquisition up to 5000 data points / sec
    d. Provide dynamic range to 1.5 GHz ($1.5\ e^{9}$ cps)

33. The dual-stage detector assembly shall come standard with the system.

G. Vacuum System Shall Meet the Following:

34. The vacuum system shall utilize a turbo molecular pump to maintain vacuum at $1e^{-6}$ Torr (or lower), includes vacuum chamber isolation valve which automatically closes as plasma is extinguished or with system faults. The pumping system shall have enough capacity to reach operating vacuum from atmosphere in less than 20 minutes.

35. In the event of vacuum failure, the entire vacuum system shall be automatically back-filled by inert gas to preserve the cleanliness of the system.
36. Turbo molecular vacuum pump shall be purged by an inert gas during operation to prevent damage by reactive gases and/or corrosive vapors such as those generated by the analysis of phosphoric acid.

37. Computer controlled roughing pump shall utilize ultra-long life PFPE (Fomblin) fluid and automatically shift into energy saving mode when the plasma is off.

H. System Personal Computer Controller and Operating System Shall Meet the Following Minimum Requirements:

38. New desktop PC with adequate processor to run system software and desktop applications including virus protection, and networking software;

39. Windows 7 Operating System;

40. 4 Gigabytes Random Access Memory (RAM);

41. 320 gigabyte hard drive;

42. DVD reader and writer;

43. Keyboard & optical USB mouse;

44. Ethernet Port, minimum of 4 USB ports;

45. 19 inch color LCD monitor;

46. Ink jet color printer;

47. All necessary computer/printer cables.

I. System Software Shall Include:

48. Routine Maintenance Alerts; scheduled user defined alerts for continued operations.

49. Method Development wizards or equivalent.

50. Pre-set methods

51. Automated quality control checking features.

52. The system software shall support the following calibration curve fit modes for quantitative analysis:
    - Linear least squares.
    - Weighted linear least squares.
    - Linear forced-through-zero least squares.
    - Method of standard additions (Matrix Matched calibration)
    - Additions calibration.

53. Real time graphics with ability to display transient and continuous signal profiles.

54. Quantitative analysis including external calibration, additions (matrix matched) calibrations, method of standard additions, isotope ratios and isotope dilution's and semi quantitative analysis.

55. All analytical raw data shall be retained and stored on hard disk.

56. The quadrupole shall be able to be tuned or mass calibrated on a minimum of 5 elements (Be, Co, In, Mg, Pb), providing a printed mass calibration report with all elements.

57. QC protocol limits on measured values, allowing the analyst to define when and how an action is taken, and to specify a second QC action for automatic operation in the event that the first action fails.

58. On-line help with quick steps to reference entire instrument user manual.

59. Data reprocessing on stored data without re-running samples for changes of calibration points, internal standard points or curve fit mode.

60. Computer controlled automatic selection of cell gas when multiple gases or mixed mode are specified within a single method.

61. Computer controlled automated optimization of cell gas flow.

62. System shall be capable of supporting a syringe-pump based auto dilution system.

63. The software shall support auto dilutions by both a global dilution factor and serial dilutions for samples out of range.

64. All software shall be pre-installed on the PC and shall also include an installation disk(s).

J. Auto Sampler Options Shall Meet the Following:

65. The system shall include a random access auto sampler capable of holding 150 or more 15 mL sample vessels.

66. The system shall be capable of being controlled with the instrument software.

K. Tools, Consumables and Manuals

67. System shall come with all tools necessary for service by operator.

68. System shall come with a kit containing a typical one year's supply of consumables.

69. System shall include one complete printed manual and one complete manual on optical media.

L. Warranty

70. System shall come with a minimum one (1) year manufacturer's warranty that includes parts and labor. Quote shall included prices for a one year service contract that will take effect after the one year warranty period. The service contract shall include one preventative maintenance visit by the company service technician.

M. Shipping, Setup and Training

71. Price shall include all shipping costs to the Guthrie laboratory, unloading, and set up of the instrument at Guthrie and one day of training on the operation of the instrument and software at the Guthrie Lab. The vendor shall also offer optional hands-on training at the vendors' facility location within 90 days after installation of the unit.

Guthrie Lab
4900 Brenda Lane, Bldg.14
Charleston, WV 25312-9307