REQUEST FOR BIDS/PROPOSALS COVERSHEET

THE UNIVERSITY OF SOUTHERN MISSISSIPPI
Procurement and Contract Services
118 College Drive #5003, Hattiesburg, Mississippi 39406-0001

Date: September 28, 2018

Bid No. 19-10

THE UNIVERSITY OF SOUTHERN MISSISSIPPI is considering the purchase of the following item(s). We ask that you submit your bid and retain one copy for your files. Right is reserved to accept or reject any part of your bid. Your quotation will be given consideration if received in Bond Hall, Room 214 on or before:

2:00 p.m. CST

October 18, 2018

Buyer: Jessica Turner

NOTE: If you cannot quote on the exact material shown, please indicate any exception giving brand name and complete specifications of any alternate. If additional space is required, use a separate sheet or letter of transmittal.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>QUANTITY</th>
<th>UNIT PRICE</th>
<th>TOTAL NET PRICE</th>
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<tr>
<td>RFx #3160002545</td>
<td>DESCRIPTION</td>
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<td>Bid 19-10 Infrared Fourier Vacuum Spectrometer</td>
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PROPOSAL MUST BE RETURNED TO THE UNIVERSITY IN ACCORDANCE WITH THE SPECIFICATIONS. RFP NUMBER AND DATE OF BID OPENING MUST BE SHOWN ON THE OUTSIDE OF THE ENVELOPE IF USING THAT METHOD.

We quote you as above-F.O.B. The University of Southern Mississippi. Shipment can be made in ________ days from receipt of order. DATE ________ TERMS

Return quotation to Procurement Services at above address.

Signature Required
1.) Failure to examine any drawings, specifications, and instructions will be at bidder’s risk.

2.) Samples of items when called for must be furnished free of expense and if not destroyed in testing, will, upon request, be returned at the bidder’s expense. Request for the return of samples must be made within ten (10) days following opening bids. Each individual sample must be labeled with bidder’s name and manufacturer’s brand name and number.

3.) Bids must be signed and sealed with bidder’s name and address on the outside of the envelope, and the time and date of the bid opening and the bid file number shown in the lower-left corner of the packages; envelopes, express mailing labels, boxes, etc.

4.) In order for your bid to be considered, it must be received and time stamped in our office by 2:00 P.M. of the bid opening date. It is the responsibility of the vendor to ensure their bid is received within the appointed time. If your bid package is not received in Bond Hall, Room 214, by 2:00 P.M. of the bid opening date, it will not be considered.

If you are delivering your bid, you need to hand carry the bid package to:

The University of Southern Mississippi
Procurement Services
Bond Hall, Room 214
Hattiesburg, Mississippi

If you are mailing your bid package via U.S. Postal Service, mail to:

The University of Southern Mississippi
Procurement Services
118 College Drive #5003
Hattiesburg, MS 39406-0001

If you are express mailing your bid package via Federal Express or UPS, or any other delivery service which requires the use of a physical address, deliver to:

The University of Southern Mississippi
Receiving Department
2609 West 4th Street
Hattiesburg, MS 39401
5.) Bids or proposals shall not be modified, corrected, altered, or amended after the specified closing time and the opening of such bids, unless otherwise noted in the request for bids or proposals.

6.) The University of Southern Mississippi reserves the right to reject any and all bids, to waive any informality in bids, and unless otherwise specified by the bidders, to accept any items on the bid. If the bidder fails to state the time within which bids must be accepted, it is understood and agreed that The University of Southern Mississippi shall have 60 days to accept. The University of Southern Mississippi reserves the right to make an award to this bid on an all or none basis, or on a line by line basis, whichever serves the best interest of The University of Southern Mississippi.

7.) Contracts and purchases will be made or entered into with the lowest, responsible bidder meeting specifications.

8.) A written purchase order or contract award mailed or otherwise furnished to the successful bidder within the time of acceptance specified in the Invitation for Bid results in a binding contract without further action by either party. The contract shall not be assignable by the vendor in whole or in part without the written consent of The University of Southern Mississippi.

9.) Bid files may be examined during normal working hours by bid participants. Non-participants will be prohibited from obtaining any information relative to the bid until the official award has been made.

10.) If purchase orders or contracts are canceled because of the awarded vendor’s failure to perform or request for price increase, that vendor shall be removed from our bidders’ list for a period of 24 months.

11.) No addendum will be issued within a period of two (2) working days prior to the time and date set for the bid opening. Should it become necessary to issue an addendum within the two-day period prior to the bid opening, the bid date will be reset giving bidders ample time to answer the addendum.

12.) Alternate bids, unless specifically requested or allowed, will not be considered.

13.) Bid openings will be conducted open to the public. However, they will serve only to open the bids. No discussion will be entered into with any vendor as to the quality or provisions of the specifications, and no award will be made either stated or implied at the bid opening. After the close of the bid opening meeting, the bids will be considered to be in the evaluation process and will not be available for review by bidders. Proposal openings are not required to be open to the public; however, the resulting award is open for public inspection.

14.) Prices quoted shall be firm for the term of the contract or for the stated time of
15.) The bidder understands that The University of Southern Mississippi is an equal opportunity employer and, therefore, maintains a policy which prohibits unlawful discrimination based on race, color, creed, sex, age, national origin, physical handicap, disability, or any other such discrimination; and the bidder, by signing this bid, agrees during the term of agreement that the bidder will strictly adhere to this policy in its employment practices and provision of products or services.

16.) Bidders must upon request of The University of Southern Mississippi furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. The University of Southern Mississippi reserves the right to make the final determination as to the bidder’s ability.

17.) Questions or problems arising from bid procedures should be directed to the Buyer listed on the solicitation at:

The University of Southern Mississippi
118 College Drive #5003
Hattiesburg, MS 39406-0001
Phone: (601) 266-4131

18.) All items must equal or exceed the specifications listed. The absence of detail specifications or the omission of detail description shall be recognized as meaning that only the best commercial practices are to prevail and that only first quality materials and workmanship are to be used.

19.) It is the intent of the specifications to obtain a product that will adequately meet the needs of the user while promoting the greatest extent of competition that is practicable. It is the responsibility of the prospective bidder to review the entire Invitation to Bid packet and to notify The University of Southern Mississippi if the Specifications, Instructions, General, or Special Conditions are formulated in a manner which would unnecessarily restrict competition.

20.) It shall be incumbent upon the bidders to understand the specifications. Any requests for clarifications shall be in writing and shall be submitted to our Procurement Services office at least five (5) days prior to the time and date set for the bid opening, unless otherwise noted in the bid or proposal specifications.

21.) The minimum specifications are used to set a standard and in no case are used with the intention to discriminate against any manufacturer. Bidders should note the name and the manufacturer and model number of the product they propose to furnish and submit descriptive literature.

22.) Trade names, brand names, and/or manufacturer’s information used in these specifications are for the purpose of establishing quality, unless otherwise noted. Bids on
products of other qualified manufacturers are acceptable, provided they are demonstrated as equal to those specified in construction, design and suitability. Each bidder shall submit with his bid a complete brochure with pictures on each item and shall point out specifically any deviations from the specified items. Failure to do so may disqualify any bid. Please bid as specified or an approved equal.

23.) A copy of the manufacturer’s standard guarantee/warranty shall accompany and become a part of this bid.

24.) There are no federal or state laws that prohibit bidders from submitting a bid lower than a price or bid given to the U.S. Government. Bidders may bid lower than U.S. Government contract price without any liability as The University of Southern Mississippi is exempt from the provisions of the Robinson-Patman Act and other related laws. In addition, the U.S. Government has no provisions in any of its purchasing arrangements with bidders whereby a lower price to The University of Southern Mississippi must automatically be given to the U.S. Government.

25.) All invoices, unless noted otherwise, are to be billed to:

   The University of Southern Mississippi  
   Accounts Payable  
   118 College Drive #5104  
   Hattiesburg, MS 39406-0001

26.) All equipment bid shall be of current production and of the latest design and construction.

27.) Where all, or part(s), of the bid is requested on a unit price basis, both the unit prices and the extension of the unit prices constitute a basis of determining the lowest responsible and responsive bidder. In cases of error in the extension of price, the unit price will govern.

28.) Should the University of Southern Mississippi close due to inclement weather conditions, or any other unforeseen events on the bid opening date, sealed bids will open the following business day at the same time and location.

29.) As an alternative to traditional sealed bids in envelopes, the University of Southern Mississippi is capable of receiving electronic bid responses. While this option is available, it is not required and we ask that all potential respondents keep in mind that with any electronic system there could be delays or glitches with the submission process; therefore the University highly encourages traditional sealed bids which are either mailed or submitted in person. Should a vendor choose to submit their response electronically, please follow the instructions below using the following website: https://www.ms.gov/dfa/contract_bid_search/Home/Sell. On this site you will find helpful links to procurement opportunities, as well as a link to supplier registration. If not already registered in this system, potential bidders will first need to click on ‘Supplier
Registration’ and follow the steps outlined (a one-time process). Once registered, they can return to the original website and click on ‘Procurement Opportunities’ where they can either search by keyword for the bid they desire to respond to or leave the search box blank and click ‘Search’ for a listing of all current bids and proposals for the various State of Mississippi offices.

With regard to construction bids, there is one additional step required during the bid submission process. Along with the bid response and other attachments, contractors will also need to attach their Certificate of Responsibility (COR), or a statement that the bid enclosed does not exceed Fifty Thousand Dollars ($ 50,000.00). If their COR or such statement is not attached, the bid will be invalid and not considered.

AA/EOE/ADA1
General Specifications

The University is requesting an Infrared Fourier Vacuum Spectrometer system or equivalent that meets or exceeds the following specifications:

Equipment

- Vacuum FT-IR spectrometer in the standard spectral range from 8,000 to 350 cm\(^{-1}\).
- The following for the operation required components must be included:
  - MIR-KBr beamsplitter (T303/8)
  - Room temperature DLaTGS detector (D301/B)
  - High power IR source
  - Aperture wheel with 12 positions
  - Validation wheel with 6 positions
  - Vacuum optics bench with oil-free vacuum pump
- Spectral resolution must be better than 0.06 cm\(^{-1}\)
- Spectral range must be extended to (FIR IV), 680-10cm\(^{-1}\) and consist of:
  - FIR source (Hg-arc), external, incl. mount and power supply
  - Multilayer beamsplitter
  - Mylar beamsplitter 50\(\mu\)m
  - DLATGS detector (FIR) with optical filter, preamplifier and digitization electronics
- Detectors must be MCT detector, mid band, liquid N2 cooled with a spectral range: 12,000-600 cm\(^{-1}\) and D*: >2x10**10cm Hz\(^{1/2}\)/W
- Must include Step/Slow Scan Option for stepwise and slow scanner movement for temporal resolved spectroscopy (TRS) data acquisition
- Must include continuous Slow Scan functionality down to VEL=10Hz with variable scanner velocity setting
- FT-IR Spectroscopy Software Package must be included for the acquisition, processing, evaluation and reporting of IR-spectroscopic data in laboratory and process environments and is compliant with cGMP/GLP/GAMP regulations such as 21 CFR Part 11 and the FDA data integrity guideline.
- The spectrometer shall be a vacuum spectrometer capable of maintaining a working pressure of less than 5 hPa (mbar).
- For true vacuum operation, the housing of the spectrometer must be made of at least 1/4” cast aluminum. The optics must be permanently mounted so that the optical alignments is maintained under both evacuated and non-evacuated operations.
- The interferometer and sample chambers must be separately evacuable in order that the sample compartment may be brought up to atmospheric pressure without losing vacuum in the interferometer and detector chambers.
- The signal to noise for a 5 second 100% line measurement should exceed 10,000:1 peak-to-peak (or < 4.34*10-5 AU noise) using the following conditions.
  - 4 cm\(^{-1}\) spectral resolution
  - Blackman Harris 3-Term apodization
  - DTGS detector, KBr beam-splitter (8,000-350 cm\(^{-1}\)) and air-cooled source
  - Noise calculated as peak-to-peak between 2,200 to 2,100 cm\(^{-1}\)
The achievable signal to noise for a 5 second 100% line measurement should be 16,000:1 peak-to-peak (or 2.71*10^{-5} AU noise) using the following conditions.

- 4 cm^{-1} spectral resolution
- Blackman Harris 4-Term apodization
- DTGS detector, KBr beam-splitter (8,000-350 cm^{-1}) and air-cooled source
- Noise calculated as peak-to-peak value between 2,200 to 2,100 cm^{-1} for one of 10 consecutive measurement

The instrument spectral resolution should be continuously variable to a maximum of at least 0.2 cm^{-1} (apodized) and should be upgradeable to better than 0.06 cm^{-1} resolution (nonapodized). In the visible spectral range, a resolution power of better than 300,000:1 (\nu/\Delta \nu) is provided.

The standard spectral operating range should be not less than 8,000 - 350 cm^{-1}.

The spectrometer must be FULLY digital, with the dual channel ADC converter integrated with the detector preamplifier. Partly analog spectrometers are not acceptable due to possible noise pickup and degradation of the analog signal along the signal path from the detector to the ADC.

The systems A/D converter must have a 24 bit dynamic range for accurate representation of spectra and best signal to noise. Gain switching schemes to achieve higher dynamic range are not acceptable, due to generation of artifacts in the data.

The spectrometer must offer rapid scan kinetics capability and should achieve a rate of at least 65 spectra per second at 16 cm^{-1} optical resolution.

The instrument should include a software-controlled aperture wheel with 12 positions ranging from 0.25 up to 8 mm for optimization of throughput. An iris-aperture is not acceptable, due to lack of reproducibility.

Spectrometer components such as source, laser, detector, interferometer and automation units must be continuously monitored for operation within factory specifications (PerformanceGuard). The operator must be immediately notified by system software if any of the factory specifications are not met. The software must offer detailed information about the nature of the failure and suggest possible remedies.

Optical components such as detector, source and beamsplitter must be electronically coded, so that these components are automatically recognized when placed in the spectrometer or removed (Automatic Component Recognition, ACR). Appropriate acquisition parameters must be automatically set in the software.

The main sample compartment should have a center focus to accommodate the complete range of commercially available accessories and large customized accessories. The sample compartment should measure not less than 25 cm (wide) by 27 cm (deep) by 16 cm (high).

The sample compartment cover should be easily removable without the use of tools.

The instrument as well as the sample compartment must be purgeable.

The sample compartment must be equipped with mechanical lock mechanism for quick, secure and reproducible positioning of sampling accessories. The change of accessories must be possible without using any tools.

Sampling accessories that are placed in the sample compartment must be automatically identified and spectral test routines must automatically start to verify accessory performance (Automatic Accessory Recognition, AAR).

The FT-IR must incorporate a high throughput 21(or 69) degree interferometer for maximum light throughput. All optics other than the beam-splitter and non-focusing isolation windows should be reflective.

The interferometer must be True-Aligned, with active alignment inside the scanning arm of the interferometer. The active True-Alignment must be fast enough to maintain alignment of the interferometer during the scan. Dynamic alignment of the fixed mirror of the interferometer is not acceptable, because while it can serve to optimize the spectral resolution of an FT-IR spectrometer, in some cases it may move the output beam relative to the detector enough to reduce system stability and create spectral artifacts.
• The interferometer should be capable of acquiring data in both scanning directions to ensure the maximum signal-to-noise ratio in the shortest possible time.
• The interferometer bearing mechanism must be wear-free (frictionless) design to ensure unlimited lifetime. 10 years warrantee must be provided. Bearings that wear over time are not acceptable because they result in down time, require frequent maintenance and costly repair.
• The sources must be easily user replaceable and must be easily accessible.
• The detectors must be easily user changeable, with exactly reproducible positioning and a security lock.
• The system must incorporate an automated internal instrument validation unit. The internal validation unit must be able to incorporate up to 5 different validation standards and be fully software controlled. The unit must have validation standards to test for instrument wavelength (X-axis) and photometric (Y-axis) accuracy and precision. This instrument validation must not require user interaction and must produce a report documenting the results of the validation tests.
• The spectrometer must provide real time display of the infrared spectrum.
• Communication between the spectrometer and controlling PC must be performed using an Ethernet protocol.
• The system must be able to be controlled by a laptop or notebook computer.
• The system must offer remote diagnostics.
• The spectrometer must include a low noise oil-free dry vacuum pump with a capacity of 15 m3/h and long time (5 years) factory service intervals.
• The system must have a broad range power supply with the following specifications for worldwide operation: 100 - 240 VAC, 50 - 60 Hz, typically 700 W including vacuum pump (without PC-data system).

References

At least 10 similar systems shall have been installed in the United States and the bidder can supply contact information for at least 5 of those purchasers. The above requested information will assist USM in determining the bidder’s capability of meeting these requirements.

Installation/Training

Vendor must complete installation which includes set-up, run-in, and training. Final machine location, electrical, and air connections will be made by the vendor. Vendor must agree to minimum two-day training on basic machine setup and operation.

Warranty

Bidder shall submit copy of written warranty. The University is requesting a minimum 10-year warranty period on the interferometer, including parts and labor.

Freight

The university is requesting delivery to University of Southern Mississippi Polymer Science Building, Hattiesburg, MS, USA.

Copies
At least one (1) signed original and two (2) copies of the bid response **MUST** be provided. The University **requires** a portable electronic virus/malware free copy (CD, thumb drive) of the bid response from the responding Vendor to be included in the bid response package. If an electronic copy is not included, the University reserves the right to request an electronic copy of the **exact** bid response prior to review of the bid.

**Mandatory Legal Provisions**

- Any provisions disclaiming implied warranties **shall** be null and void. See Mississippi Code Annotated Sections 11-7-18 and 75-2-719(4). The Vendor **shall** not disclaim the implied warranties of merchantability and fitness for a particular purpose.
- The Vendor **shall** have no limitation on liability for claims related to the following items:
  - Infringement issues;
  - Bodily injury;
  - Death;
  - Physical damage to tangible personal and/or real property; and/or
  - The intentional and willful misconduct or negligent acts of the Vendor and/or Vendor’s employees or subcontractors.
- All requirements that the University pay interest are deleted, except for those in conjunction with USM’s standard payment terms of Net 45 days. Payments made beyond 45 days are subject to late fees and interest.
- Should any of the terms and conditions in the purchase contract be in conflict with the laws of the State of Mississippi, the laws of the State of Mississippi **shall** supersede and govern. A revision of the terms and conditions will be required to ensure compliance with Mississippi state law.
- The University shall **not** pay any attorney's fees, prejudgment interest or costs associated with any legal action to or for the Vendor, except that which are ordered by a court of competent jurisdiction.

**Payment**

The currency used for payment of costs will be in United States dollars.

State law requires that the University receive an **original invoice** from the Vendor and that payment of the invoice is processed **within 45 days of receipt** (Miss Code 31-7-305). The invoice should be on the Vendor’s letterhead and/or include an original Vendor representative signature.

**USM Terms and Conditions**

Unless written exception is provided in the bid response, the winning Vendor agrees to be bound by the USM Terms and Conditions, which are incorporated herein, and may be found at [https://www.usm.edu/procurement-contract-services/usm-terms-and-conditions](https://www.usm.edu/procurement-contract-services/usm-terms-and-conditions).

**Delivery**

Quote the lead time required for delivery of the quoted equipment. Quoted prices should be F.O.B. Destination (Hattiesburg, MS) Freight Allowed.