The University of Southern Mississippi

Notice of Proposed Sole Source Purchase

SSP 21_027

The University of Southern Mississippi anticipates purchasing the item(s) listed below as a sole source purchase. Anyone objecting to this purchase shall follow the procedures outlined below.

1. Description of the commodity that USM is seeking to procure:

A Bruker AVANCE NEO 400 MHz nuclear magnetic resonance (NMR) spectrometer for performing routine and advanced solution NMR analysis. NMR is a non-destructive analytical technique that provides detailed information on molecular structure, dynamic processes and enables the direct observation of chemical reactions for small molecule and polymer systems. The desired system has attributed including and advanced console electronics with 12.5 ns timing resolution, gradient controller, and both external and internal trigger outputs; ultra-stable shim power supply, digital lock system, variable temperature controller, and 10 Amp gradient amplifier; magnet with long-hold time (>300 days) for helium and equipped with vibrational dampers; broadband RF systems (5- 1200 MHz) with 7.5 MHz spectral observe width, high dynamic range (17 bit @ 5MHz, 23 bit @ 6 kHz), and capable of generating a variety of sophisticated waveforms; deuterium decoupling capability; broadband preamplifier (^{57}Fe to ^{19}F range); two channel RF amplifier (100 W peak/25 W CW ^{1}H, 500 W peak/50 W CW X); 5 mm double resonance probe (X nucleus direct detection, ^{1}H decoupling and indirect detection) with ^{19}F - ^{109}Ag range, ^{2}H lock, Z-gradient 5 G/(cm – A); -150 °C to +150 °C variable temperature range, and auto-tuning capability; ato sampler, 24 sample capacity; and a Linux based computer system with TopSpin software for acquisition, processing, automation, and simulation.

2. Explanation of why the commodity is the only one that meets the needs of the agency:

The University of Southern Mississippi has made a significant investment with Bruker BioSpin Nuclear Magnetic Resonance instrumentation. The School of Polymer Science and Engineering currently houses and operates an advanced Bruker 600 MHz spectrometer. Software and hardware components currently in use with the existing Bruker 600 MHz NMR are only compatible or transferable to Bruker Biospin systems. The TopSpin operating software available only from Bruker Biospin for Bruker NMR instrumentation offers considerable flexibility in terms of automation, available pulse libraries, and pulse programming necessary to serve the broad needs of users in the School. Compatibility with the existing Bruker system is required. The School's NMR facilities serve over 100 users (students, staff, and faculty) in support of both education and research operations.

The Bruker AVANCE NEO 400 MHz will replace a 20 year old NMR instrument for which parts and service are no longer available and will provide direct compatibility with existing Bruker NMR instrumentation at the University.

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3. Explanation of why the source is the only source is the only person or entity that can provide the required commodity:

Bruker Biospin Corporation is the only supplier that manufactures NMR instrumentation with direct compatibility (software and hardware) with the existing Bruker NMR instrumentation housed within the School of Polymer Science and Engineering.

4. Explanation of why the amount to be expended for the commodity is reasonable:

The University has determined that this purchase is economically viable from this source because the compatibility of equipment, accessories, replacement parts, and service are paramount considerations. Bruker Biospin is the only company that can provide an NMR system based upon specifications that is fully compatible with existing NMR systems in the School of Polymer Science and Engineering. The instrumentation broadly serves the educational needs of the School of Polymer Science and Engineering and will support multiple research programs funded by various private, state, and federal agencies. NMR instrumentation generally see service lifetimes in excess of 20 years.

5. Efforts that the agency went through to obtain the best possible price for the commodity:

Other vendors were researched but none were found that could meet the needs for software and hardware compatibility with existing and currently in-use instrumentation.

Advertisement Schedule	Date
1st scheduled	**3/12/2021**
2nd scheduled	**3/19/2021**

Any person or entity that objects and proposes that the commodity listed is not sole source and can be provided by another person or entity shall submit a written notice to:

Steve Ballew

Director of Procurement & Contracts

steve.ballew@usm.edu

Subject Line must read "Sole Source Objection"

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The notice shall contain a detailed explanation of why the commodity is not a sole source procurement. Appropriate documentation shall also be submitted if applicable.

If after a review of the submitted notice and documents, USM determines that the commodity in the proposed sole source request can be provided by another person or entity, then USM will withdraw the sole source request publication from the procurement portal website and submit the procurement of the commodity to an advertised competitive bid or selection process.

If USM determines after review that there is only one (1) source for the required commodity, then USM will appeal to the Public Procurement Review Board. USM will have the burden of proving that the commodity is only provided by one (1) source.