JUSTIFICATION FOR OTHER THAN FULL AND OPEN COMPETITION (JOFOC) FOR COMMERCIAL PRODUCTS/SERVICES OVER THE SIMPLIFIED ACQUISITION THRESHOLD (SAT) USING SIMPLIFIED PROCEDURES (REVOLUTIONARY FAR OVERHAUL (RFO))

REFERENCE: PR-OCSPP-26-00252; High-resolution accurate mass liquid chromatography/orbitrap mass spectrometer

1. The EPA – Analytical Chemistry Laboratory, Fort Meade, MD and WTSD - Water and OITA Branch proposes to restrict competition for this commercial acquisition as authorized by RFO 12.102(b).

2. Nature and/or description of the action being approved: New action using commercial procedures under GSA schedules to acquire a high-resolution accurate mass liquid chromatography/orbitrap mass spectrometer.

   Item: BRE725572 - Orbitrap Excedion Pro MS system
   Vendor: Thermo Electron North American LLC
   GSA Contract: 47QSWA21D0055

3. Description of the supplies and/or services required to meet the agency's needs (including the estimated value):

   High-resolution accurate mass liquid chromatography/orbitrap mass spectrometer that meets the minimum specifications to provide measurement capabilities for targeted analytes in supporting their environmental mission. (See Specifications attached below).

   The Thermo Scientific™ Orbitrap™ Excedion Pro with EASY-IC is a high-performance, small-footprint benchtop quadrupole Orbitrap hybrid system that combines a high-capacity transfer tube capillary, an electrodynamic ion funnel, the most advanced quadrupole technology, an ion routing multipole, and Orbitrap analyzer. The high field Orbitrap mass analyzer features high-resolution accurate mass analysis, with and without HCD fragmentation. The instrument includes the Thermo Scientific™ EASY-IC™ Ion Source which generates internal calibrant ions for realtime mass calibration of any mass spectrum.

   The instrument contains the following:
   - OptaMax Plus ion source API inlet source housing with x, y, and z probe positioning, integrated APCI compatibility, a fixed on-axis view port, and automatically connected gas and voltage connections ensuring seamless performance and ultimate reliability.
   - OptaMax Plus ion source housing includes one HESI spray insert and a calibration probe.
   - Vacuum system pumped by a 6-stage split-flow turbomolecular pump one single stage turbo pump.
   - High-Capacity Transfer Tube and an Electrodynamic Ion Funnel to capture and efficiently focus ions in a tight beam.

- Resolving injection filter and bent trap to improve robustness and to reduce noise by preventing neutral and high-velocity clusters from entering the quadrupole mass filter.
- Segmented quadrupole mass filter with rod-switching capabilities for increased robustness in front of the curved ion trap (C-Trap) with a hyperbolic surface, which provides excellent peak shape and transmission with a minimum resolution of 0.4 FWHM.
- High-field Orbitrap Mass Analyzer with enhanced FT transient processing resulting in resolving power from 3,750 up to 480,000 FWHM at m/z 200 and isotopic fidelity, m/z range of 40-6000 (up to 12,000 with Biopharma edition), and with up to 70 Hz acquisition speed. Enhanced Dynamic Range (eDR) mode enabling up to 5 orders of magnitude of intra-scan dynamic range. A TurboTMT mode ions are detected with Phi SDM processing.
- Ion routing multipole for trapping of ions and higher-energy collisional dissociation.
- Thermo Scientific™ EASY-IC™ Ion Source which generates internal calibrant ions for real-time mass calibration of any mass spectrum.
- Independent syringe pump which is controlled via the data station for maximum flexibility.

4. Identification of the statutory authority permitting other than full and open competition:

   This noncompetitive action is conducted pursuant to the authority of 41 USC 1901, as implemented by FAR 12.102(b).

5. Demonstration that the proposed contractor's unique qualifications or nature of the action requires use of the authority cited:

   The instrument from Thermo Electron North America LLC has patented technology and is the only instrument on the market capable of generating high-resolution measurements of up to 500,000 FWHM (full width at half maximum) with the option of achieving up to 1,000,000 FWHM at m/z 200 and a sub-1 ppm mass accuracy. The high resolution and accuracy in mass in sample analysis are essential for reliable identification and confirmation of target pesticides and environmental contaminants in complex sample metrices. Current analytical instruments at ACB could not produce high confidence in the sample analyses.

   In addition, it is the only instrument that provides high mass resolution and accuracy over a wide mass range including the small molecule mass range for non-targeted analyses, that are essential in the screening for and identifying of unknown compounds present in samples. The detection and identifying of unknown compounds in samples with high confidence would greatly enhance ACB's analytical capabilities and benefit the OPP's missions in general. The instrument also provides quantitative and qualitative analytical capability in a single platform and often in a single run while also reliably and routinely delivers sub-ppb sensitivity and sub-ppm mass accuracy.

6. Description of efforts made to ensure offers are solicited from as many potential sources as is practicable, including whether a notice was or will be publicized as required by RFO 5 and, if not, which exception applies:

There is only one responsible source available for the instrument required given the specifications – Exemption: RFO FAR 5.101(b)(2).

7. Determination by the CO that the anticipated cost to the government will be fair and reasonable:

   The CO determines the anticipated price will be fair and reasonable because the equipment will be purchased using commercial acquisition procedures for an item that is widely available in the marketplace to both Government and non-Government customers. The CO will also rely on the subject matter expertise of the program office's evaluation team, whose experience, market research, and general knowledge of the marketplace will allow for an opinion as to price fairness and reasonableness for this piece of equipment.

8. A description of the market research conducted and results, or the reason market research was not conducted.

   Several research techniques used:
   - Researched instruments available through vendors (see market research memo)
     - No other vendors, except Thermo Electron, were found with an instrument that meets the specifications needed
   - Past purchases of mass spectrometers used for similar testing
   - Consulted with other federal agencies with similar projects

9. Any other facts supporting using other than full and open competition:

   None.

10. A listing of the sources, if any, that expressed in writing an interest in the acquisition:

    Only responsible source identified – Thermo Electron summitted a quote.

11. A statement of any actions the agency will take to remove or overcome any future barriers to competition before any subsequent acquisition for the supplies or services required:

    No other actions are available to remove or overcome the barriers to competition given that only one responsible source has been identified and the vendor holds a patent to the technology that allows for the specifications needed for the instrument.

12. CO certification:

    I certify that this justification is accurate and complete to the best of my knowledge and belief. Since this effort does not exceed $900,000, this certification serves as approval.

Keith Pfeffer, Contracting Officer

Signature: KEITH PFEFFER Digitally signed by KEITH PFEFFER Date: 2026.06.04 12:32:13 -04'00'

Date: 6/4/2026

ALL QUESTIONS REGARDING THIS JUSTIFICATION ARE TO BE REFERRED TO Contracting Officer: Keith Pfeffer at pfeffer.keith@epa.gov or Contract Specialist: Somer Belcher at belcher.somer@epa.gov.