

## Supplier Scouting Opportunity 2023-030

**Item to be scouted:** Continuous Particulate Monitor

**Days:** 2

**Item description:** Purchase of a new particulate monitor. U.S. EPA designated Federal Equivalent Method (FEM) instrument for PM2.5 (EQPM-0609-183) and PM10 (EQPM-1102-150) regulatory compliance monitoring. The specific configuration of the requested instrument includes: 110 VAC; 50/60 Hz; Tripod & Extended Tube Assay; PM10 U.S. EPA impactor inlet; and Very Sharp Cut Cyclone (VSCC) PM2.5 inlet combination. The U.S. EPA Office of Research and Development (ORD) is statutorily mandated to review the field performance of Federal Reference Method (FRM) and FEM monitors. The research objectives for which this analyzer will be used is to evaluate the field performance of this specific instrument based upon its recent EPA designation modifications (September 2022). Performance metrics for EPA designated instruments are detailed in 40 CFR Part 53, Subpart C and includes accuracy (40 CFR Part 53 Table B-1), precision (40 CFR Part 53 Table B-1), lower detection limit (40 CFR Part 53 Table B-1), freedom from co-pollutant interferences (40 CFR Part 53 Table B-3), and drift (40 CFR Part 53 Table B-1).

**NAICS code:** 42370

### Technical Information

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#### Supplier Information

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**Type of supplier being sought:** Manufacturer

**Reason for scouting submission:** Required by EPA procurement group even though this is a sole source procurement

### Summary of technical specifications and performance requirements

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**Describe the manufacturing processes (elaborate to provide as much detail as possible):** Product produced as designated by U.S. EPA for PM2.5 (EQPM0609-183) and PM10 (EQPM1102-150).

#### Provide dimensions / size / tolerances / performance specifications for the item:

Continuous PM2.5 and PM10 Instrument Performance Specifications:

1. The continuous ambient PM2.5 and PM10 instrument must use the beta attenuation analytical method as detailed in recently modified EPA Federal Equivalent Method (FEM) designations for PM2.5 (EQPM0609-183) and PM10 (EQPM1102-150).
2. The continuous ambient PM2.5 and PM10 instrument must have a minimum detection limit of <4 ug m<sup>-3</sup> (1 hour) and < 1 ug m<sup>-3</sup> (24 hour).
3. The continuous ambient PM2.5 and PM10 instrument must have a minimum linear dynamic range from 1 to 1000 ug m<sup>-3</sup>.
4. The continuous ambient PM2.5 and PM10 instrument must provide a minimum measurement time resolution of one (1) minute.
5. The continuous ambient PM2.5 and PM10 instrument must have a linearity equal to or less than 2% through minimum dynamic range detailed in specification 3.

6. The continuous ambient PM2.5 and PM10 instrument must have a precision equal to or less than 5% through minimum dynamic range detailed in specification 3.
7. The continuous ambient PM2.5 and PM10 instrument must have a measurement resolution equal to or less than 0.1 ug m-3.
8. The continuous ambient PM2.5 and PM10 instrument must have solid state internal non-volatile memory with sufficient capacity to store a minimum of one (1) month of one (1) minute integrated monitoring data.
9. The continuous ambient PM2.5 and PM10 instrument must have a minimum operating temperature range of 10 – 30°C
10. The continuous ambient PM2.5 and PM10 instrument must have Ethernet or USB connectivity to support external data logging functionality.
11. The continuous ambient PM2.5 and PM10 instrument must be mountable into a standard nineteen (19) inch instrument rack and include rack mount ears for securing the instrument into an instrument rack.
12. The continuous ambient PM2.5 and PM10 instrument must be listed and labeled with a third party electrical safety certification approved by the North Carolina Building Code Council  
[\(https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.ncdoi.com%2FOSFM%2FEngineering and Codes%2FDocuments%2FCode Enforcement Resources%2FElectricalMechanicalEquipmentLabeling.pdf&data=05%7C01%7Cscouting%40nist.gov%7C62a4c9c873d1435a2f3108db1a8d1cfa%7C2ab5d82fd8fa4797a93e054655c61dec%7C1%7C0%7C638132965605903832%7CUnknown%7CTWFpbGZsb3d8eyJWoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=iNLdELk7mVBUfChG2L5LmX0jTcv7GGzLu2ZnO9%2BRMMU%3D&reserved=0\)](https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.ncdoi.com%2FOSFM%2FEngineering%2FDocuments%2FCode%20Enforcement%20Resources%2FElectricalMechanicalEquipmentLabeling.pdf&data=05%7C01%7Cscouting%40nist.gov%7C62a4c9c873d1435a2f3108db1a8d1cfa%7C2ab5d82fd8fa4797a93e054655c61dec%7C1%7C0%7C638132965605903832%7CUnknown%7CTWFpbGZsb3d8eyJWoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C3000%7C%7C%7C&sdata=iNLdELk7mVBUfChG2L5LmX0jTcv7GGzLu2ZnO9%2BRMMU%3D&reserved=0) 
 for equipment category 28 (Laboratory, Equipment, Electrical Measuring, and Testing Equipment).
13. The continuous ambient PM2.5 and PM10 instrument must have a 115V & 60 Hz electrical requirement.
14. The continuous ambient PM2.5 and PM10 instrument must have a minimum of a two (2) year warranty in material and workmanship.
15. The continuous ambient PM2.5 and PM10 instrument must include all consumables and spare parts required to run the instrument continuously for one (1) year.

**List required materials needed to make the product, including materials of product components:**  
 Product produced as designated by U.S. EPA for PM2.5 (EQPM0609-183) and PM10 (EQPM1102-150).

**Are there applicable certification requirements?:** No

**Are there applicable regulations?:** Ambient air pollution monitor produced as designated by U.S. EPA for PM2.5 (EQPM0609-183) and PM10 (EQPM1102-150).

**Are there any other standards, requirements, etc.?:** No

**Business Information**

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**Volume and pricing**

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**Estimated potential business volume:** 1 each

**Estimated target price / unit cost information (if unavailable explain):** \$41,000 USD

**Delivery requirements**

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**When is it needed by?:** 120 days.

**Describe packaging requirements:** Boxed.

**Where will this item be shipped?:** Research Triangle Park, NC 27711.