

ITEM OPPORTUNITY SYNOPSIS

Name of the item to be scouted: Dual Isotope Methane Analyzer

State item to be used in: North Carolina

Describe the Item:

Please describe the item application/the end use of item. Purchase of a dual laser spectrometer (similar to the Aerodyne system) capable of measuring methane concentrations and isotope ratios ($d^{13}CH_4$, $d^{12}CH_3D$) in ambient air. This instrument will be integrated with an existing platform of instruments used to directly measure fluxes of CH_4 by eddy covariance over a range of area source types (land fill, municipal waste, agricultural sources, terrestrial ecosystems). Combined with direct measurement of emission rates, information on the isotopic characteristics of CH_4 allow for development of signatures of specific sources, characterization of the relative contribution of source types to ambient methane, and investigation of CH_4 production mechanisms. This combination of measurements will facilitate improvement of emission inventories and process-based CH_4 emission models.

Supplier Information:

Type of Supplier being sought (select from list below)

Manufacturer

Contract Manufacturer

Distributor

Other (please specify)

Reason for scouting submission (select from list below)

2nd Supplier

Price

Re-Shore

Past supplier no longer available

New Product Startup

BABA

Other (please specify)

Summary of Technical Specifications and Performance Requirements:

Describe the manufacturing processes (elaborate to provide as much detail as possible). This is a custom built analytical instrument for measurement of methane isotopes in the atmosphere.

Provide dimensions / size / tolerances / performance specifications of the item. Performance specifications/requirements are as follows: 1) Instrument must continuously measure CH₄, d¹³CH₄, d¹²CH₃D 1-second time resolution without chemical processing or separation. 2) Instrument must have the following (1s) minimum precisions (at typical ambient conditions): CH₄ = 200 ppt, d¹³CH₄ = 1 ‰, d¹²CH₃D = 30 ‰. 3) Repeatability must exceed 0.1 ‰ for d¹³CH₄ and 3 ‰ for d¹²CH₃D for a 30-minute measurement. 4) Instrument must be capable of response time = 4 Hz to enable eddy covariance flux measurements. 5) Instrument must have an optical path length of 200 meters or higher using an optical multipass cell 6) Instrument must use TDLWintel software for instrument control and data acquisition for compatibility with existing infrastructure and software 7) Must include modular sampling system to enable discrete measurements on flask samples or manually injected samples with dilution.

List required materials needed to make the product, including materials of product components, if applicable. To be determined by manufacturer.

Are there applicable certification requirements?

Yes

No

Please Explain:

Are there any applicable regulations that apply to the production of this item?

Yes

No

Please Explain:

Are there any other standards, requirements?

Yes

No

Please Explain:

Additional Comments:

Additional technical comments:

Volume and Pricing:

Estimated Potential Business Volume (i.e. #Units per day, month, year): I do not know.

Estimated Target Price / Unit Cost Information: \$266,850.00

Delivery Requirements:

When is it needed by? (Immediate, 30 days, 6 months, etc) Within 8 months of vendor receipt of order.

Describe packaging requirements (i.e., individually/ group packaging). To be determined by vendor.

Where will this item be shipped? US EPA Attn: John Walker 4930 Old Page Rd Durham, NC 27714

Additional Comments:

Is there other information you would like to include?