



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at ***wvOASIS.gov***. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at ***WVPurchasing.gov*** with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Welcome, Lu Anne Cottrill

Procurement

Budgeting

Accounts Receivable

Accounts Payable

Solicitation Response(SR)

Dept: 0313

ID: ESR12071700000002485

Ver.: 1

Function: New

Phase: Final

Modified by batch , 12/07/2017

Header 5

List View

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 388426

SO Doc Code: CRFQ

Procurement Type: Central Purchase Order

SO Dept: 0313

Vendor ID: 000000100799

SO Doc ID: DEP1800000009

Legal Name: THERMO ENVIRONMENTAL INSTRUMENTS

Published Date: 11/15/17

Alias/DBA:

Close Date: 12/7/17

Total Bid: \$44,688.60

Close Time: 13:30

Response Date: 12/07/2017

Status: Closed

Response Time: 12:12

Solicitation Description: Continuous Sulfur Dioxide (SO2) Analyzers DAQ18-4

Total of Header Attachments: 5

Total of All Attachments: 5

Apply Default Values to Commodity Lines

View Procurement Folder



Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Solicitation Response

Proc Folder : 388426

Solicitation Description : Continuous Sulfur Dioxide (SO2) Analyzers DAQ18-4

Proc Type : Central Purchase Order

Date issued	Solicitation Closes	Solicitation Response	Version
	2017-12-07 13:30:00	SR 0313 ESR12071700000002485	1

VENDOR

000000100799

THERMO ENVIRONMENTAL INSTRUMENTS

Solicitation Number: CRFQ 0313 DEP1800000009

Total Bid : \$44,688.60

Response Date: 2017-12-07

Response Time: 12:12:41

Comments:

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham
(304) 558-2157
brittany.e.ingraham@wv.gov

Signature on File

FEIN #

DATE

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Continuous Sulfur Dioxide (SO2) Analyzers	3.00000	EA	\$14,896.200000	\$44,688.60

Comm Code	Manufacturer	Specification	Model #
41113100			

Extended Description :	Three (3) Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or Equal
------------------------	--



Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

State of West Virginia
Request for Quotation
27 — Miscellaneous

Proc Folder: 388426

Doc Description: Continuous Sulfur Dioxide (SO₂) Analyzers DAQ18-4

Proc Type: Central Purchase Order

Date Issued	Solicitation Closes	Solicitation No	Version
2017-11-15	2017-12-07 13:30:00	CRFQ 0313 DEP1800000009	1

BID RECEIVING LOCATION

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

VENDOR

Vendor Name, Address and Telephone Number:

Thermo Environmental Instruments LLC

27 Forge Parkway

Franklin, MA 02038

866-282-0430

FOR INFORMATION CONTACT THE BUYER

Brittany E Ingraham

(304) 558-2157

brittany.e.ingraham@wv.gov

Signature X Audrey Carroll FEIN # 04-2745178

DATE

12-7-17

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION:**Request for Quotation**

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Environmental Protection, Division of Air Quality to establish a contract for the one-time purchase of three (3) Continuous Sulfur Dioxide (SO₂) Analyzers, Teledyne Advanced Pollution Instrumentation model T100 or Equal, per the bid requirements, specifications, terms and conditions attached to this solicitation.

INVOICE TO	SHIP TO
ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 601 57TH ST SE CHARLESTON WV25304 US	ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 131A PENINSULA ST WHEELING WV 26003 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Continuous Sulfur Dioxide (SO ₂) Analyzers	3.00000	EA	\$14,896.20	\$44,688.60

Comm Code	Manufacturer	Specification	Model #
41113100	Thermo Scientific		43iQ-ACN

Extended Description :

Three (3) Continuous Sulfur Dioxide (SO₂) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or Equal

DEP1800000009	Document Phase Draft	Document Description Continuous Sulfur Dioxide (SO2) Analyzers DAQ18-4	Page 3
----------------------	--------------------------------	---	---------------

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

☒ A pre-bid meeting will not be held prior to bid opening

☐ A NON-MANDATORY PRE-BID meeting will be held at the following place and time:

☐ A MANDATORY PRE-BID meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in, but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below in order to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted e-mails should have solicitation number in the subject line.

Question Submission Deadline: November 29, 2017 at 9:00 AM EST

Submit Questions to: Brittany Ingraham

2019 Washington Street, East

Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: Brittany.E.Ingraham@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:
 Department of Administration, Purchasing Division
 2019 Washington Street East
 Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

SEALED BID:
 BUYER:
 SOLICITATION NO.:
 BID OPENING DATE:
 BID OPENING TIME:
 FAX NUMBER:

The Purchasing Division may prohibit the submission of bids electronically through wvOASIS at its sole discretion. Such a prohibition will be contained and communicated in the wvOASIS system resulting in the Vendor's inability to submit bids through wvOASIS. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

For Request For Proposal ("RFP") Responses Only: In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus N/A convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

- ☐ Technical
☐ Cost

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by wvOASIS (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: December 7, 2017 at 1:30 PM EST

Bid Opening Location: Department of Administration, Purchasing Division
 2019 Washington Street East
 Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATES: Any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may only be granted upon written request and only in accordance with the West Virginia Code § 5A-3-37 and the West Virginia Code of State Rules. A Vendor Preference Certificate form has been attached hereto to allow Vendor to apply for the preference. Vendor's failure to submit the Vendor Preference Certificate form with its bid will result in denial of Vendor Preference. Vendor Preference does not apply to construction projects.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires, and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform, or lacks the integrity and reliability to assure good-faith performance.”

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

22. INTERESTED PARTY DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$100,000, the vendor must submit to the Purchasing Division a disclosure of interested parties to the contract, prior to contract award. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission.

"Interested parties" means: (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors; (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract; and (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency: Provided, That subdivision (2) shall be inapplicable if a business entity is a publicly traded company: Provided, however, That subdivision (3) shall not include persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.

2. DEFINITIONS: As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.

2.1. "Agency" or "Agencies" means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.

2.2. "Bid" or "Proposal" means the vendors submitted response to this solicitation.

2.3. "Contract" means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.

2.4. "Director" means the Director of the West Virginia Department of Administration, Purchasing Division.

2.5. "Purchasing Division" means the West Virginia Department of Administration, Purchasing Division.

2.6. "Award Document" means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.

2.7. "Solicitation" means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.8. "State" means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.

2.9. "Vendor" or "Vendors" means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

☐ **Term Contract**

Initial Contract Term: This Contract becomes effective on _____ and extends for a period of _____ year(s).

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to _____ successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

☐ **Alternate Renewal Term** – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

☐ **Fixed Period Contract:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

☐ **Fixed Period Contract with Renewals:** This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that maintenance, monitoring, or warranty services will be provided for _____ year(s) thereafter.

☒ **One Time Purchase:** The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

☐ **Other:** See attached _____.

4. NOTICE TO PROCEED: Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

☐ **Open End Contract:** Quantities listed in this Solicitation are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

☐ **Service:** The scope of the service to be provided will be more clearly defined in the specifications included herewith.

☒ **Combined Service and Goods:** The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

☒ **One Time Purchase:** This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **BID BOND (Construction Only):** Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

☐ **PERFORMANCE BOND:** The apparent successful Vendor shall provide a performance bond in the amount of _____. The performance bond must be received by the Purchasing Division prior to Contract award. On construction contracts, the performance bond must be 100% of the Contract value.

☐ **LABOR/MATERIAL PAYMENT BOND:** The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

☐ **MAINTENANCE BOND:** The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

☐ **LICENSE(S) / CERTIFICATIONS / PERMITS:** In addition to anything required under the Section entitled Licensing, of the General Terms and Conditions, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits prior to Contract award, in a form acceptable to the Purchasing Division.

☐

☐

☐

☐

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below prior to Contract award. Subsequent to contract award, and prior to the insurance expiration date, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies mandated herein, including but not limited to, policy cancelation, policy reduction, or change in insurers. The insurance coverages identified below must be maintained throughout the life of this contract. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether or not that insurance requirement is listed in this section.

Vendor must maintain:

☐ **Commercial General Liability Insurance** in at least an amount of:

☐ **Automobile Liability Insurance** in at least an amount of: _____

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of:

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of:

☐ **Cyber Liability Insurance** in an amount of: _____

☐ **Builders Risk Insurance** in an amount equal to 100% of the amount of the Contract.

☐

☐

☐

☐

☐

9. WORKERS' COMPENSATION INSURANCE: The apparent successful Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

☐ _____ for _____

☐ Liquidated Damages Contained in the Specifications

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification.

14. PAYMENT: Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

15. PURCHASING CARD ACCEPTANCE: The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract unless the box below is checked.

☐ Vendor is not required to accept the State of West Virginia's Purchasing Card as payment for all goods and services.

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence with regard to all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances. Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments. Notwithstanding the foregoing, Purchasing Division approval may or may not be required on certain agency delegated or exempt purchases.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. BANKRUPTCY: In the event the Vendor files for bankruptcy protection, the State of West Virginia may deem this Contract null and void, and terminate this Contract without notice.

31. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

32. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

33. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities. Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section.

34. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

35. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

36. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

37. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

38. PURCHASING AFFIDAVIT: In accordance with West Virginia Code § 5-22-1(i), the contracting public entity shall not award a contract for a construction project to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees. Accordingly, prior to contract award, Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

39. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE: This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"). Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. If the Vendor does not wish to extend the prices, terms, and conditions of its bid and subsequent contract to the Other Government Entities, the Vendor must clearly indicate such refusal in its bid. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

40. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

41. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

☒ Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

☐ Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.requisitions@wv.gov.

42. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. The State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check.

Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

43. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
- d. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

44. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel products. This preference shall be applied to an item of machinery or equipment, as indicated above, when

the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

45. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$100,000, the vendor must submit to the Agency a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. "Interested parties" means: (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors; (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract; and (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency: Provided, That subdivision (2) shall be inapplicable if a business entity is a publicly traded company: Provided, however, That subdivision (3) shall not include persons or business entities performing legal services related to the negotiation or drafting of the applicable contract. The Agency shall submit a copy of the disclosure to the Ethics Commission within 15 days after receiving the supplemental disclosure of interested parties.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Audrey Carroll, Sr. Contract Mgr.
 (Name, Title)
 Audrey Carroll, Senior Contracts Manager
 (Printed Name and Title)
 27 Forge Parkway, Franklin, MA 02038
 (Address)
 508-553-1186 / 508-520-2800
 (Phone Number) / (Fax Number)
 Audrey.Carroll@thermofisher.com
 (email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Thermo Environmental Instruments LLC
 (Company)
Audrey Carroll
 (Authorized Signature) (Representative Name, Title)
 Audrey Carroll, Senior Contracts Manager
 (Printed Name and Title of Authorized Representative)
12-7-17
 (Date)
 508-553-1186 / 508-520-2800
 (Phone Number) (Fax Number)

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Department of Environmental Protection, Division of Air Quality to establish a contract for the one-time purchase of three (3) Continuous Sulfur Dioxide (SO₂) Analyzers, Teledyne Advanced Pollution Instrumentation model T100 or Equal.
2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
 - 2.1 **"Contract Item"** means Continuous Sulfur Dioxide (SO₂) Analyzers, Teledyne Advanced Pollution Instrumentation model T100 or equal as more fully described by these specifications.
 - 2.2 **"Pricing Page"** means the pages, contained in wvOASIS or attached as Exhibit A, upon which Vendor should list its proposed price for the Contract Items.
 - 2.3 **"Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
 - 2.4 **"°C"** means (degrees Celsius) a system of measuring temperature where water freezes at 0 degrees and boils at 100 degrees.
 - 2.5 **"Analog Output"** means an output terminal on the instrument, which carries a variable voltage level representing the value of the pollutant detected by the instrument.
 - 2.6 **"APIcom"** means a proprietary communications software for remote communication with and control of the instrument.
 - 2.7 **"Bandpass"** means transmitting only a specific set range of frequencies and blocking all others.
 - 2.8 **"cm³ (or ccm)"** means cubic centimeter, a commonly used unit of volume that extends the derived SI-unit cubic meter, and corresponds to the volume of a cube that measures 1 cm × 1 cm × 1 cm.
 - 2.9 **"Critical orifice"** means a component to keep flow constant, independent of pressure variations.

- 2.10 “DC”** means direct current.
- 2.11 “Desiccant”** means a hygroscopic substance used as a drying agent.
- 2.12 “EPA”** means the United States Environmental Protection Agency.
- 2.13 “Ethernet”** means a system for connecting several computer systems to form a local area network, with protocols to control the passing of information.
- 2.14 “Fall time”** means the time required for measurement to fall from 90 percent to 10 percent of its steady value.
- 2.15 “Filter”** means a porous device for removing impurities or solid particles from a liquid or gas passed through it.
- 2.16 “Flow rate”** means the volume of gas which passes per unit time.
- 2.17 “FS”** means full scale.
- 2.18 “Hz”** cycles per second.
- 2.19 “Lag time”** means the period between introduction of measured gas and the instrument response.
- 2.20 “LDL”** means Lower Detectable Limit which is the lowest quantity of a substance that can be distinguished from the absence of that substance (a blank value) within a stated confidence limit.
- 2.21 “Linearity”** the property of a mathematical relationship or function which means that it can be graphically represented as a straight line.
- 2.22 “Min”** means minute which is a unit of time equal to 60 seconds.
- 2.23 “mm”** means millimeter or one thousandth of a meter, or 0.039 inch.
- 2.24 “nm”** means nanometer an SI unit of length equal to one billionth of a meter.

- 2.25 “Optical filter”** means a component that selectively transmits light of a certain wavelength.
- 2.26 “Particulate”** means relating to or in the form of minute separate particles.
- 2.27 “PMT”** means photomultiplier tube which is a vacuum tube that detects light especially from dim sources using photoemission and successive instances of secondary emission to produce enough electrons to generate a useful current.
- 2.28 “ppb”** means parts per billion the number of units of mass of a contaminant per 1000 million units of total mass.
- 2.29 “ppm”** means parts per million or the number of units of mass of a contaminant per 1 million units of total mass.
- 2.30 “Precision”** means the degree of agreement among a series of measurements of the same quantity.
- 2.31 “Pump”** means a mechanical device using suction or pressure to move gases.
- 2.32 “Rise time”** means the time required for measurement to rise from 10 percent to 90 percent of its steady value.
- 2.33 “RMS”** means Root-Mean-Square, the most common mathematical method of defining the effective voltage or current of an AC wave.
- 2.34 “RS-232”** means a standard for serial communication transmission of data.
- 2.35 “Software”** means the programs and other operating information used by a computerized instrument.
- 2.36 “Span”** means the upper limit of the selected range of measurement of the instrument.
- 2.37 “Span drift”** means a gradual change in the scale span of a measuring instrument.
- 2.38 “SO₂”** means Sulfur Dioxide, a colorless pungent toxic gas formed by burning fuel.

- 2.39 “USB”** means Universal Serial Bus, an industry standard that defines cables, connectors and communications protocols for connection, communication, and power supply between computers and devices.
- 2.40 “UV”** means ultraviolet, an electromagnetic radiation with wavelengths shorter than visible light.
- 2.41 “VAC”** means Volts Alternating Current, an electric current which periodically reverses direction.
- 2.42 “VDC”** means Volts Direct Current, an electric current that only flows in one direction.
- 2.43 “Zero”** means the lower limit of the selected range of measurement of the instrument.
- 2.44 “Zero drift”** means a gradual change in the scale zero of a measuring instrument.

3. GENERAL REQUIREMENTS:

- 3.1 Mandatory Contract Item Requirements:** Contract Item must meet or exceed the mandatory requirements listed below.

3.1.1 Three (3) Continuous Sulfur Dioxide (SO₂) Analyzers, Teledyne Advanced Pollution Instrumentation model T100 or equal.

3.1.1.1 Each analyzer must be capable of operating in full compliance with US CFR 40, Part 50, Appendix A-1, “Reference Measurement Principle and Calibration Procedure for the Measurement of Sulfur Dioxide in the Atmosphere (Ultraviolet Fluorescence Method)” and must carry a Federal Automated Equivalent Method designation from USEPA, for measurement of SO₂ at 0-1000 ppb
<https://www.ecfr.gov/cgi-bin/text-idx?SID=a5e47cfe04cd3bbfdf0d43a64f74c402&mc=true&node=ap4.0.2.50.119.a.61&rgn=div9>

3.1.1.2 Each analyzer must operate on 120VAC, 60Hz, single-phase power.

- 3.1.1.3 Must have multiple user-selectable ranges, a minimum 0-50 ppb to a maximum 0-20 ppm.**
- 3.1.1.4 The SO₂ proportional output voltage(s) must have dual ranges and auto ranging.**
- 3.1.1.5 Must have a screen measuring at a minimum 6.5 x 3.9, color graphics display with touch screen interface.**
- 3.1.1.6 Must have microprocessor control.**
- 3.1.1.7 Must have Ethernet, RS-232 and USB com ports.**
- 3.1.1.8 Must have front panel USB connections for peripheral devices and firmware upgrades.**
- 3.1.1.9 Must have adaptive signal filtering to optimize response time during rapid changes in pollutant concentration.**
- 3.1.1.10 Must have temperature and pressure compensation.**
- 3.1.1.11 Must have internal data logging with programmable averaging periods.**
- 3.1.1.12 Must have flow stabilized through use of critical orifices.**
- 3.1.1.13 Must have ability to log virtually any operating parameter.**
- 3.1.1.14 Must have operating temperature range of 5° to 40°C and maintain EPA equivalency.**
- 3.1.1.15 Must have zero noise of less than 0.2 ppb (RMS) or better.**
- 3.1.1.16 When above 50ppb, it must have span noise of less than 0.5% of reading (RMS).**
- 3.1.1.17 Must have lower detectable limit (LDL) of 0.4 ppb or less.**

- 3.1.1.18** Must have zero drift of less than 0.5 ppb over 24 hours.
- 3.1.1.19** Must have span drift of less than 0.5% of FS over 24 hours.
- 3.1.1.20** Must have lag time of 20 seconds or less.
- 3.1.1.21** Must have rise and fall time of less than 100 seconds, to achieve 95% of the measured value.
- 3.1.1.22** Must have linearity of 1% of full scale or less.
- 3.1.1.23** Must have a precision of 0.5% or less at levels above 50 ppb.
- 3.1.1.24** Must have sample flow rate of 650 cm³/min \pm 10%.
- 3.1.1.25** Must have analog outputs of 10V, 5V, 1V, 0.1V DC, that are selectable.
- 3.1.1.26** Must have an internal pump to maintain federal equivalency.
- 3.1.1.27** Must have a holder for a 47mm particulate filter.
- 3.1.1.28** Must have APIcom remote control software or 100% compatible equivalent.
- 3.1.1.29** Each analyzer must be supplied with an expendables kit for one year of operation. The kit includes: thirty (30) sample inlet particulate filters, twelve (12) desiccant bags for the PMT assembly, one (1) pump rebuild and two (2) flow control orifice rebuild kits.
- 3.1.1.30** Each analyzer must be supplied with two (2) extra UV lamps.
- 3.1.1.31** Each analyzer must be supplied with four (4) extra 214 nm bandpass optical filters.

3.1.2 Customer Support

3.1.2.1 Vendor must provide telephone and email technical support at no extra charge for the life of the instruments.

3.1.2.2 Vendor must provide at a minimum a two-year manufacturer's warranty to cover functional defects in materials and workmanship of the equipment and parts.

3.1.2.3 Vendor must replace any analyzer that fails to perform as specified in the first 120 days after delivery with a new analyzer.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price for the Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.1.1 Vendor should provide with their bid a copy of any and all Software Terms and Conditions or licenses that the State of West Virginia or the Agency will have to agree to or accept as a part of this solicitation. **This information will be required before Purchase Order is issued.**

4.1.2 Vendor should include a copy of any Maintenance Terms and Conditions or Licenses that the State of West Virginia or the Agency will be required to agree to and accept as a part of this solicitation. **This information will be required before Purchase Order is issued.**

4.2 Pricing Page: Vendor should complete the Exhibit "A" Pricing Page by providing a unit cost and multiplying by the quantity to calculate the extended cost. Vendor should complete the Pricing Page in full as failure to complete the Pricing Page in its entirety may result in Vendor's bid being disqualified.

Vendor's who wish to respond to a Centralized Request for Quotation (CRFQ) online may submit information through the State's wvOASIS Vendor Self Service (VSS) website. If unable to respond online, Vendor must submit the Pricing Page with their submitted bid prior to the schedule bid opening date.

Vendor should electronically enter the information into the Exhibit "A" Pricing Page through wvOASIS, if available, or as an electronic document. Vendors can download

the electronic copy of the Exhibit "A" Pricing Page that is attached separately to the CRFQ and published to the Vendor Self-Service (VSS) website.

Vendor should type or electronically enter the information into the Pricing Page to prevent errors in the evaluation.

4.2.1 If the Vendor is submitting an Equivalent Brand, this information including Model Number must be submitted with their bid submission.

Any product brochures to support vendor's product should be submitted with vendor's bid response. Vendor should identify those sections where product meets required specifications. These brochures and any supporting documentation may be required before award of contract.

5. PAYMENT:

5.1 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

6.1 Shipment and Delivery: Vendor shall ship the Contract Items immediately after being awarded this Contract and receiving a purchase order or notice to proceed. Vendor shall deliver the Contract Items within sixty (60) calendar days after receiving a purchase order or notice to proceed. Contract Items must be delivered to Agency at **James P. Ebert WVDEP-Division of Air Quality 131A Peninsula Street, Wheeling, WV 26003.**

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if the shipment of the Contract Items will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the Contract, and/or obtaining the Contract Items from a third party.

Any Agency seeking to obtain the Contract Items from a third party under this provision must first obtain approval of the Purchasing Division.

6.3 Delivery Payment/Risk of Loss: Vendor shall deliver the Contract Items F.O.B. destination to the Agency's location.

6.4 Return of Unacceptable Items: If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that items are unacceptable, or permit the

Agency to arrange for the return and reimburse Agency for delivery expenses. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

- 6.5 Return Due to Agency Error:** Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

7 VENDOR DEFAULT:

7.1 The following shall be considered a vendor default under this Contract.

- 7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
- 7.1.2** Failure to comply with other specifications and requirements contained herein.
- 7.1.3** Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
- 7.1.4** Failure to remedy deficient performance upon request.

7.2 The following remedies shall be available to Agency upon default.

- 7.2.1** Immediate cancellation of the Contract.
- 7.2.2** Immediate cancellation of one or more release orders issued under this Contract.
- 7.2.3** Any other remedies available in law or equity.

Exhibit A Pricing Page

ITEM NO.	SPEC. REF. #	DESCRIPTION	Brand/Model Bid if 'or Equal'	QUANTITY	UNIT COST	EXTENDED PRICE
1	3.1.1	Continuous Sulfur Dioxide (SO ₂) Analyzers, Teledyne Advanced Pollution Instrumentation Model T100 or Equal	Thermo Scientific Model 43iQ-ACN Sulfur Dioxide (SO ₂) Analyzers	3	\$14,896.20	\$44,688.60
TOTAL BID AMOUNT						\$44,688.60

Company: Thermo Environmental Instruments LLC

Name: Audrey Carroll

Signature: *Audrey Carroll*

Date: 12-7-17

VENDOR PREFERENCE CERTIFICATE

Certification and application is hereby made for Preference in accordance with **West Virginia Code, §5A-3-37**. (Does not apply to construction contracts). **West Virginia Code, §5A-3-37**, provides an opportunity for qualifying vendors to request (at the time of bid) preference for their residency status. Such preference is an evaluation method only and will be applied only to the cost bid in accordance with the **West Virginia Code**. This certificate for application is to be used to request such preference. The Purchasing Division will make the determination of the Vendor Preference, if applicable.

- N/A
1. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
☐ Bidder is an individual resident vendor and has resided continuously in West Virginia for four (4) years immediately preceding the date of this certification; or,
☐ Bidder is a partnership, association or corporation resident vendor and has maintained its headquarters or principal place of business continuously in West Virginia for four (4) years immediately preceding the date of this certification;
☐ Bidder is a resident vendor partnership, association, or corporation with at least eighty percent of ownership interest of bidder held by another entity that meets the applicable four year residency requirement; or,
☐ Bidder is a nonresident vendor which has an affiliate or subsidiary which employs a minimum of one hundred state residents and which has maintained its headquarters or principal place of business within West Virginia continuously for the four (4) years immediately preceding the date of this certification; or,
 2. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
☐ Bidder is a resident vendor who certifies that, during the life of the contract, on average at least 75% of the employees working on the project being bid are residents of West Virginia who have resided in the state continuously for the two years immediately preceding submission of this bid; or,
 3. ☐ **Application is made for 2.5% vendor preference for the reason checked:**
☐ Bidder is a nonresident vendor that employs a minimum of one hundred state residents, or a nonresident vendor which has an affiliate or subsidiary which maintains its headquarters or principal place of business within West Virginia and employs a minimum of one hundred state residents, and for purposes of producing or distributing the commodities or completing the project which is the subject of the bidder's bid and continuously over the entire term of the project, on average at least seventy-five percent of the bidder's employees or the bidder's affiliate's or subsidiary's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years and the vendor's bid; or,
 4. ☐ **Application is made for 5% vendor preference for the reason checked:**
☐ Bidder meets either the requirement of both subdivisions (1) and (2) or subdivision (1) and (3) as stated above; or,
 5. ☐ **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
☐ Bidder is an individual resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard and has resided in West Virginia continuously for the four years immediately preceding the date on which the bid is submitted; or,
 6. ☐ **Application is made for 3.5% vendor preference who is a veteran for the reason checked:**
☐ Bidder is a resident vendor who is a veteran of the United States armed forces, the reserves or the National Guard, if, for purposes of producing or distributing the commodities or completing the project which is the subject of the vendor's bid and continuously over the entire term of the project, on average at least seventy-five percent of the vendor's employees are residents of West Virginia who have resided in the state continuously for the two immediately preceding years.
 7. ☐ **Application is made for preference as a non-resident small, women- and minority-owned business, in accordance with West Virginia Code §5A-3-59 and West Virginia Code of State Rules.**
☐ Bidder has been or expects to be approved prior to contract award by the Purchasing Division as a certified small, women- and minority-owned business.

Bidder understands if the Secretary of Revenue determines that a Bidder receiving preference has failed to continue to meet the requirements for such preference, the Secretary may order the Director of Purchasing to: (a) rescind the contract or purchase order; or (b) assess a penalty against such Bidder in an amount not to exceed 5% of the bid amount and that such penalty will be paid to the contracting agency or deducted from any unpaid balance on the contract or purchase order.

By submission of this certificate, Bidder agrees to disclose any reasonably requested information to the Purchasing Division and authorizes the Department of Revenue to disclose to the Director of Purchasing appropriate information verifying that Bidder has paid the required business taxes, provided that such information does not contain the amounts of taxes paid nor any other information deemed by the Tax Commissioner to be confidential.

Bidder hereby certifies that this certificate is true and accurate in all respects; and that if a contract is issued to Bidder and if anything contained within this certificate changes during the term of the contract, Bidder will notify the Purchasing Division in writing immediately.

Bidder: Thermo Environmental Inst Signed: Audrey Carrol
Date: 12-7-17 Title: Sr. Contract Mgr

*Check any combination of preference consideration(s) indicated above, which you are entitled to receive.

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$100,000 or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

36

(Required by W. Va. Code § 6D-1-2)

Contracting Business Entity: Thermo Environmental Instruments LLC Address: 27 Forge Parkway
Franklin, MA 02038

Authorized Agent: _____ Address: _____

Contract Number: _____ Contract Description: SO2 Analyzer

Governmental agency awarding contract: State of WV

☐ Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

☐ Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

☐ Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

☐ Check here if none, otherwise list entity/individual names below.

Signature: Audrey Carroll Date Signed: 12-7-2017

Notary Verification

State of MA, County of Norfolk:

I, Audrey Carroll, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 7 day of December, 2017.

Meredith McDonald
Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: _____

Date submitted to Ethics Commission: _____

Governmental agency submitting Disclosure: _____



STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL OTHER CONTRACTS: Under W. Va. Code § 5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code § 61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Thermo Environmental Instruments LLC

Authorized Signature: Audrey Carroll Date: 12-7-2017

State of MA

County of Norfolk, to-wit:

Taken, subscribed and sworn to before me this 7 day of December, 2017.

My Commission expires 3/16, 2023.

AFFIX SEAL HERE

NOTARY PUBLIC

Meredith McDonald
Purchasing Affidavit (Revised 07/07/2017)





CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
07/05/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Aon Risk Services Northeast, Inc.
Boston MA Office
One Federal Street
Boston MA 02110 USA

CONTACT NAME:
PHONE (A/C No. Ext): (866) 283-7122 FAX (A/C No.): (800) 363-0105
E-MAIL ADDRESS:

INSURED
Thermo Environmental Instruments LLC
Thermo Fisher Scientific Inc.
27 Forge Parkway
Franklin MA 02038 USA

INSURER(S) AFFORDING COVERAGE		NAIC #
INSURER A:	ACE American Insurance Company	22667
INSURER B:	Travelers Property Cas Co of America	25674
INSURER C:	ACE Property & Casualty Insurance Co.	20699
INSURER D:		
INSURER E:		
INSURER F:		

COVERAGES

CERTIFICATE NUMBER: 570067457607

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDITIONAL INSURED	SUBROGATION	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER			G23866948008 SIR applies per policy terms & conditions	07/01/2017	07/01/2018	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/OP AGG \$4,000,000
B	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> Hired AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY			TC2JCAP-7439L260-17	07/01/2017	07/01/2018	COMBINED SINGLE LIMIT (Ea accident) \$2,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION			X00G28133613002	07/01/2017	07/01/2018	EACH OCCURRENCE \$10,000,000 AGGREGATE \$10,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	TC2JUB121D764717	07/01/2017	07/01/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E L EACH ACCIDENT \$1,000,000 E L DISEASE-EA EMPLOYEE \$1,000,000 E L DISEASE-POLICY LIMIT \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Evidence of Insurance.

CERTIFICATE HOLDER

CANCELLATION

Thermo Environmental Instruments LLC
Thermo Fisher Scientific Inc.
27 Forge Parkway
Franklin MA 02038 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Northeast, Inc.

Holder Identifier :

Certificate No : 570067457607

SALES QUOTATION

THERMO ENVIRONMENTAL INSTRUMENTS, LLC

27 FORGE PARKWAY

FRANKLIN, MA 02038

PH: 508-520-0430

PH: 866-282-0430

Date	12/06/17	RFQ/Bid#	
Quote #	FRAQ77525	Ship Via	Best Way
FOB	Franklin, MA	Delivery	8 Weeks ARO
Terms	Net 30 (Pending Review)		

Quotation Submitted By:

Contact Diane Wood

Phone # 508-553-1246

Quote To:

State of West Virginia

Purchasing Division

2019 Washington Street East

Charleston

WV

25305-0130

ATTN:

Brittany E Ingraham

304-558-2157

brittany.e.ingraham@wv.gov

To Place Order:

eMail: orders.aqi@thermofisher.com

Fax: (508) 520-2800

Additional terms & conditions on last page

Please have PO made out to THERMO ENVIRONMENTAL INSTRUMENTS LLC

Qty	Part #	Description	Unit Price	Ext. Price
		Request for Quotation Solicitation No. CRFQ 0313 DEP1800000009 Continuous Sulfur Dioxide (SO2) Analyzers DAQ18-4		
3	43iQ-ACN	Thermo Scientific Model 43iQ Pulsed Fluorescent SO2 Analyzer Measurement Ranges from 0-50 ppb to 0-100 ppm A - 100-120 VAC 50/60 Hz C - Serial, Analog and Digital N - No Zero/Span Valves		
3	43iQ-EXT1	43iQ Extended Warranty for 1 additional year		
3	FREIGHT	Freight Charges		
		Consumable Spares		
3	117615-00	Pump Rebuild Kit		
3	117712-00	O-Ring Kit, (Capillary) 10/Pkg		
6	8919	Capillary, .013, Yel/Blu		
6	8666	Lamp, UV Source (43i)		
12	8852	FILTER, DETECTOR		
SubTotal				\$44,688.60

Regional Sales Manager:

Pete Pepe 484-269-1363

Representative: W.B. Wells - David Wells Tel: 412-221-0390

In an effort to continue to support our mission of making the world cleaner, healthier and safer we are migrating to a digital footprint for operating manuals as of July 1, 2017. Paper manuals will no longer ship with instrumentation as of July 1, 2017. Please visit www.thermofisher.com for the latest operating manuals, software and firmware.

By signing below, you (i) warrant that you are an authorized representative of your company, (ii) agree that the Thermo Environmental Instruments LLC Terms and Conditions of Sale attached hereto (the "Terms and Conditions") shall supersede any preprinted terms and conditions, in their entirety, contained in any purchase order that your company issues and (iii) the Terms and Conditions shall exclusively govern the transaction(s) contemplated hereby.

Competitive finance options are available with fast and simple documentation. Please contact your local sales representative for more information on our lease offerings from Thermo Fisher Financial Services.

This quotation is subject to the terms and conditions on the attachment labeled Thermo Environmental Instruments, LLC Standard Terms and Condition of Sale, as well as the terms outlined in the Service Maintenance Agreement and any associated Service Level Descriptions, which shall constitute the exclusive terms governing the contracts between us for your order. Also, if applicable, a valid export license may be required for shipment of goods outside the territories of the U.S.A.

Product lead-times are subject to change. Our Minimum Order Amount is \$50.00. For government agencies our Cage Code is: 0HTS3. Above pricing excludes freight charges and/or applicable hazardous materials fee.

NOTE: This quotation is only valid for product utilization within the United States.

Please visit us on the web at www.thermo.com/aqi for order status, software downloads, manuals, and product literature.

Thermo Environmental Instruments LLC. is part of Thermo Fisher Scientific.

THERMO ENVIRONMENTAL INSTRUMENTS LLC ("Seller")
TERMS AND CONDITIONS OF SALE FOR PRODUCTS AND SERVICE

UNLESS OTHERWISE EXPRESSLY AGREED IN WRITING, THE FOLLOWING TERMS AND CONDITIONS SHALL APPLY:

1. **GENERAL.** Seller hereby offers for sale to the buyer named on the face hereof ("Buyer") the products (the "Products") and services (the "Services") listed on the face hereof on the express condition that Buyer agrees to accept and be bound by the terms and conditions set forth herein. Any provisions contained in any document issued by Buyer are expressly rejected and if the terms and conditions in this agreement ("Agreement") differ from the terms of Buyer's offer, this document shall be construed as a counter offer and shall not constitute acceptance of Buyer's document. Buyer's receipt of Products or Seller's commencement of the services provided hereunder will constitute Buyer's acceptance of this Agreement. This is the complete and exclusive statement of the contract between Seller and Buyer with respect to Buyer's purchase of the Products and Services. No waiver, consent, modification, amendment or change of the terms contained herein shall be binding unless in writing and signed by Seller and Buyer. Seller's failure to object to terms contained in any subsequent communication from Buyer will not be a waiver or modification of the terms set forth herein. All orders are subject to acceptance in writing by an authorized representative of Seller.

2. **PRICE.** All prices published by Seller or quoted by Seller's representatives may be changed at any time without notice. All prices quoted by Seller or Seller's representatives are valid for thirty (30) days, unless otherwise stated in writing. All prices for the Products or Services will be as specified by Seller or, if no price has been specified or quoted, will be Seller's price in effect at the time of shipment or delivery of service. All prices are subject to adjustment for the provision, incurrence or performance of any specifications, quantities, raw materials, production costs, shipment or other conditions that Seller's original price quotation did not include.

FIRM FIXED SERVICE PRICING: This form of service contract provides for a daily rate for field service which includes travel time, on site labor and living expenses. Air travel and car hire related expenses will be charged in addition to the day rate at cost plus a 10% administration fee. The daily rate represents up to ten (10) hours of work time within the window of 6:00 a.m. to 6:00 p.m. Overtime shall be charged in two hour blocks. Travel time shall be charged at the daily rate and shall be billed in five-hour blocks. Any parts used shall be invoiced at Seller published rates. Work Time shall include all hours that Seller's service personnel are on the Buyer's job site, either working or ready for work and shall be payable at the applicable specified rates. Standby Time shall include all time that Seller's service personnel are available for work at the Buyer's job site, whether on the job site or not, up to a maximum of 12 hours a day, between the hours of 6:00 a.m. and 6:00 p.m., Sunday through Saturday, including holidays if availability has been requested by Buyer. Standby Time shall be paid for at the applicable daily rate; however, Standby Time, as well as Travel Time, preceded and/or followed by Work Time is cumulative in determining Overtime. Travel Time shall include the time spent by Seller's service personnel traveling between their customary headquarters and the Buyer's job site and in returning (including travel occurring on Saturdays, Sundays and holidays). Cancellation of scheduled service shall be subject to a cancellation fee if Seller is not notified at least seven days prior to the scheduled date of service. Radioactive material transfers pricing shall be quoted on an individual basis. Work postponed or suspended by Buyer, due to no fault of Seller, shall be subject to Seller withdrawal and rescheduling, and any costs (including travel time and expenses) incurred by Seller will be charged to the Buyer.

3. **TAXES AND OTHER CHARGES.** Prices for the Products and Services exclude all sales, use, value added and other taxes and duties imposed with respect to the sale, delivery, or use of any Products or Services covered hereby, all of which taxes and duties must be paid by Buyer. If Buyer claims any exemption, Buyer must provide a valid, signed certificate or letter of exemption for each respective jurisdiction.

4. **TERMS OF PAYMENT.** Seller may invoice Buyer upon shipment or completion of Products and Services for the price and all other charges payable by Buyer in accordance with the terms on the face hereof. If no payment terms are stated on the face hereof, payment shall be net thirty (30) days from the date of invoice. International service may require payment in advance. If Buyer fails to pay any amounts when due, Buyer shall pay Seller interest thereon at a periodic rate of one and one-half percent (1.5%) per month (or, if lower, the highest rate permitted by law), together with all costs and expenses (including without limitation reasonable attorneys' fees and disbursements and court costs) incurred by Seller in collecting such overdue amounts or otherwise enforcing Seller's rights hereunder. Seller reserves the right to require from Buyer full or partial payment in advance, or other security that is satisfactory to Seller, at any time that Seller believes in good faith that Buyer's financial condition does not justify the terms of payment specified. All payments shall be made in U.S. Dollars.

5. **DELIVERY; CANCELLATION OR CHANGES BY BUYER; BUYER RESPONSIBILITIES.** The Products will be shipped to the destination specified by Buyer, Ex-Works Seller's shipping point. Seller will have the right, at its election, to make partial shipments of the Products and to invoice each shipment separately. Seller reserves the right to withhold shipments in whole or in part if Buyer fails to make any payment to Seller when due or otherwise fails to perform its obligations hereunder. All shipping dates are approximate only, and Seller will not be liable for any loss or damage resulting from any delay in delivery or failure to deliver which is due to any cause beyond Seller's reasonable control. In the event of a delay due to any cause beyond Seller's reasonable control, Seller reserves the right to terminate the order or to reschedule the shipment within a reasonable period of time, and Buyer will not be entitled to refuse delivery or otherwise be relieved of any obligations as the result of such delay. Products as to which delivery is delayed due to any cause within Buyer's control may be placed in storage by Seller at Buyer's risk and expense and for Buyer's account. Orders in process may be canceled only with Seller's written consent and upon payment of Seller's cancellation charges. Orders in process may not be changed except with Seller's written consent and upon agreement by the parties as to an appropriate adjustment in the purchase price therefor. Credit will not be allowed for Products returned without the prior written consent of Seller.

Buyer shall provide Seller personnel reasonable access to Buyer's job site as required. Buyer shall cooperate with Seller personnel so that Seller personnel may perform the Services efficiently and without interruption. Seller shall be allowed use of Buyer equipment which Seller personnel deem necessary for performance of service. Buyer shall be responsible for the procurement, installation, and maintenance of all non-Seller communication media including but not limited to telephone and communication equipment for the remote transmission of data.

FOR CONTINUOUS EMISSIONS MONITORING SYSTEMS (CEMS) ONLY: Buyer shall designate a key operator who shall be made a point of contact available to Seller to describe instrument malfunctions to Seller representatives by telephone and who shall be qualified by Seller to perform simple adjustments and corrections as requested by Seller's representatives. If Buyer fails to designate a key operator or to perform specified Buyer maintenance, Seller shall have the right, in its reasonable discretion and at Buyer's expense, to initiate a service call to perform any actions that any such designee would have otherwise customarily performed. Seller may invoice Buyer at its standard rates for service, travel, labor and parts.

6. **TITLE AND RISK OF LOSS.** Notwithstanding the trade terms indicated above and subject to Seller's right to stop delivery of Products in transit, title to and risk of loss of the Products will pass to Buyer in accordance with trade terms Ex-Works Seller's shipping point; provided, however, that title to any software incorporated within or forming a part of the Products shall at all times remain with Seller or the licensor(s) thereof, as the case may be. Seller may assist Buyer in arranging transportation of the Products at Buyer's cost. Buyer agrees that such assistance by Seller will not modify the transfer of title herein.

7. **WARRANTY.** With respect to Products, Seller warrants that on the date of delivery, the Products will operate or perform substantially in conformance with Seller's published specifications and be free from defects in material and workmanship, when subjected to normal, proper and intended usage by properly trained personnel, for the period of time set forth in the product documentation, published specifications or package inserts. With respect to Services, Seller warrants that it shall perform the Services in a professional, workmanlike manner. If a period of time is not specified in Seller's product documentation, published specifications or package inserts, the product warranty period shall be one (1) year from the date of shipment to Buyer for Products; provided however the warranty period for spare parts shall be ninety (90) days from the date of shipment, and for Services ninety (90) days from the date of delivery (the "Warranty Period"). With respect to Products, Seller agrees, during the applicable Warranty Period, to repair or replace, at Seller's option, defective Products so as to cause the same to operate in substantial conformance with said published specifications; provided that Buyer shall (a) promptly notify Seller in writing upon the discovery of any defect, which notice shall include the product model and serial number (if applicable) and details of the warranty claim; and (b) after Seller's review, Seller will provide Buyer with service data and/or a Return Material Authorization ("RMA"), which may include biohazard decontamination procedures and other product-specific handling instructions. Then, if applicable, Buyer may return the defective Products to Seller with all costs prepaid by Buyer. Replacement parts may be new or refurbished, at the election of Seller. All replaced parts shall become the property of Seller. Shipment to Buyer of repaired or replacement Products shall be made in accordance with the Delivery provisions hereunder. Consumables and normal wear and tear are expressly excluded from this warranty. With respect to Services, upon receipt, during the applicable Warranty Period, from Buyer, of written notice that any Services fail the limited service warranty set forth herein, Seller shall promptly re-perform such Service or, at Seller's option, grant Buyer a credit for the amount paid by Buyer with respect to such Service.

Notwithstanding the foregoing, Products supplied by Seller that are obtained by Seller from an original manufacturer or third party supplier are not warranted by Seller, but Seller agrees to assign to Buyer any warranty rights in such Product that Seller may have from the original manufacturer or third party supplier, to the extent such assignment is allowed by such original manufacturer or third party supplier.

In no event shall Seller have any obligation to make repairs, replacements or corrections required, in whole or in part, as the result of or with respect to: (a) use of the Products in a manner for which they were not designed; (b) improper storage and handling of the Products; (c) use of the Products in combination with equipment or software not supplied by Seller (d) shipping damage incurred en route to Buyer's site or because of moving equipment, in which case Seller will promptly provide a cost estimate for repairs to the consignee for filing claims to carriers for shipping damage; (e) flood, lightning, earthquake, tornado, hurricane or fire, bombing, armed conflict, malicious mischief, sabotage or other natural or man-made disasters; (f) physical abuse, misuse, sprinkler damage, electrical surge or abnormal power variation; (g) repairs, maintenance, or modifications made by anyone other than Seller trained personnel or without Seller's supervision and/or approval; (h) relocation and reinstallation of equipment; although upon request Seller will supervise the removing, crating, relocation and reinstallation of equipment at Seller's current service rate; (i) maintenance or replacement of media whatever the reason for loss, failure or damage; (j) the service of non-Seller material or equipment; (k) beta-site or demo support; or (m) service calls made to train operators, repair an equipment malfunction wherein the fault is not with the equipment. Seller reserves the right to make any changes in the design or construction of Seller's instruments. Buyer agrees to allow Seller at Seller's expense to make retrofits or design changes which do not substantially impair performance.

If Seller determines that Products or Services for which Buyer has requested a warranty remedy are not covered by the warranty hereunder, Buyer shall pay or reimburse Seller for all costs of investigating and responding to such request at Seller's then prevailing time and materials rates. ANY INSTALLATION, MAINTENANCE, REPAIR, SERVICE, RELOCATION OR ALTERATION TO OR OF, OR OTHER TAMPERING WITH, THE PRODUCTS PERFORMED BY ANY PERSON OR ENTITY OTHER THAN SELLER WITHOUT SELLER'S PRIOR WRITTEN APPROVAL, OR ANY USE OF REPLACEMENT PARTS NOT SUPPLIED BY SELLER, SHALL IMMEDIATELY VOID AND CANCEL ALL WARRANTIES WITH RESPECT TO THE AFFECTED PRODUCTS.

THE OBLIGATIONS CREATED BY THIS WARRANTY STATEMENT TO REPAIR OR REPLACE A DEFECTIVE PRODUCT AND REPERFORM (OR, AT SELLER'S OPTION, CREDIT AMOUNTS PAID WITH RESPECT TO SERVICES) SHALL BE THE SOLE REMEDY OF BUYER IN THE EVENT OF A DEFECTIVE PRODUCT OR DEFECTIVE SERVICES. EXCEPT AS EXPRESSLY PROVIDED IN THIS WARRANTY STATEMENT, SELLER DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, ORAL OR WRITTEN, WITH RESPECT TO THE PRODUCTS, INCLUDING WITHOUT LIMITATION ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR NON-INFRINGEMENT. SELLER DOES NOT WARRANT THAT THE PRODUCTS ARE ERROR-FREE OR WILL ACCOMPLISH ANY PARTICULAR RESULT. WARRANTIES EXTEND ONLY TO THE ORIGINAL PURCHASER AND ARE NOT ASSIGNABLE OR OTHERWISE TRANSFERABLE. ANY ASSIGNMENT OR TRANSFER BY BUYER SHALL BE VOID.

8. **INDEMNIFICATION.**

8.1 **By Seller.** Seller agrees to indemnify, defend and save Buyer, its officers, directors, and employees from and against any and all damages, liabilities, actions, causes of action, suits, claims, demands, losses, costs and expenses (including without limitation reasonable attorney's fees) ("Indemnified Items") for (a) bodily injury to or death of persons or damage to tangible property to the extent caused by the negligence or willful misconduct of Seller, its employees, agents or representatives or contractors in connection with the performance of services

at Buyer's premises under this Agreement and (b) claims that a Product infringes any valid United States patent, copyright or trade secret; provided, however, Seller shall have no liability under this Section to the extent any such Indemnified Items are caused by either (i) the negligence or willful misconduct of Buyer, its employees, agents or representatives or contractors, (ii) by any third party, (iii) use of a Product in combination with equipment or software not supplied by Seller where the Product would not itself be infringing, (iv) compliance with Buyer's designs, specifications or instructions, (v) use of the Product in an application or environment for which it was not designed or (vi) modifications of the Product by anyone other than Seller without Seller's prior written approval. Buyer shall provide Seller prompt written notice of any third party claim covered by Seller's indemnification obligations hereunder. Seller shall have the right to assume exclusive control of the defense of such claim or, at the option of the Seller, to settle the same. Buyer agrees to cooperate reasonably with Seller in connection with the performance by Seller of its obligations in this Section.

Notwithstanding the above, Seller's infringement related indemnification obligations shall be extinguished and relieved if Seller, at its discretion and at its own expense (x) procures for Buyer the right, at no additional expense to Buyer, to continue using the Product; (y) replaces or modifies the Product so that it becomes non-infringing, provided the modification or replacement does not adversely affect the specifications of the Product; or (z) in the event (x) and (y) are not practical, refund to Buyer the amortized amounts paid by Buyer with respect thereto, based on a five (5) year amortization schedule. THE FOREGOING INDEMNIFICATION PROVISION STATES SELLER'S ENTIRE LIABILITY TO BUYER FOR THE CLAIMS DESCRIBED HEREIN.

8.2 By Buyer. Buyer shall indemnify, defend with competent and experienced counsel and hold harmless Seller, its parent, subsidiaries, affiliates and divisions, and their respective officers, directors, shareholders and employees, from and against any and all damages, liabilities, actions, causes of action, suits, claims, demands, losses, costs and expenses (including without limitation reasonable attorneys' fees and disbursements and court costs) to the extent arising from or in connection with (i) the negligence or willful misconduct of Buyer, its agents, employees, representatives or contractors; (ii) use of a Product in combination with equipment or software not supplied by Seller where the Product itself would not be infringing; (iii) Seller's compliance with designs, specifications or instructions supplied to Seller by Buyer; (iv) use of a Product in an application or environment for which it was not designed; or (v) modifications of a Product by anyone other than Seller without Seller's prior written approval.

9. SOFTWARE. With respect to any software products incorporated in or forming a part of the Products hereunder, Seller and Buyer intend and agree that such software products are being licensed and not sold, and that the words "purchase", "sell" or similar or derivative words are understood and agreed to mean "license", and that the word "Buyer" or similar or derivative words are understood and agreed to mean "licensee". Notwithstanding anything to the contrary contained herein, Seller or its licensor, as the case may be, retains all rights and interest in software products provided hereunder.

Seller hereby grants to Buyer a royalty-free, non-exclusive, nontransferable license, without power to sublicense, to use software provided hereunder solely for Buyer's own internal business purposes on the hardware products provided hereunder and to use the related documentation solely for Buyer's own internal business purposes. This license terminates when Buyer's lawful possession of the hardware products provided hereunder ceases, unless earlier terminated as provided herein. Buyer agrees to hold in confidence and not to sell, transfer, license, loan or otherwise make available in any form to third parties the software products and related documentation provided hereunder. Buyer may not disassemble, decompile or reverse engineer, copy, modify, enhance or otherwise change or supplement the software products provided hereunder without Seller's prior written consent. Seller will be entitled to terminate this license if Buyer fails to comply with any term or condition herein. Buyer agrees, upon termination of this license, immediately to return to Seller all software products and related documentation provided hereunder and all copies and portions thereof.

Certain of the software products provided by Seller may be owned by one or more third parties and licensed to Seller. Accordingly, Seller and Buyer agree that such third parties retain ownership of and title to such software products. The warranty and indemnification provisions set forth herein shall not apply to software products owned by third parties and provided hereunder.

10. LIMITATION OF LIABILITY. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, THE LIABILITY OF SELLER UNDER THESE TERMS AND CONDITIONS (WHETHER BY REASON OF BREACH OF CONTRACT, TORT, INDEMNIFICATION, OR OTHERWISE, BUT EXCLUDING LIABILITY OF SELLER FOR BREACH OF WARRANTY (THE SOLE REMEDY FOR WHICH SHALL BE AS PROVIDED UNDER SECTION 7 ABOVE) SHALL NOT EXCEED AN AMOUNT EQUAL TO THE LESSER OF (A) THE TOTAL PURCHASE PRICE THERETOFORE PAID BY BUYER TO SELLER WITH RESPECT TO THE PRODUCT(S) OR SERVICES GIVING RISE TO SUCH LIABILITY OR (B) ONE MILLION DOLLARS (\$1,000,000). NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED HEREIN, IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING WITHOUT LIMITATION DAMAGES FOR LOSS OF USE OF FACILITIES OR EQUIPMENT, LOSS OF REVENUE, LOSS OF DATA, LOSS OF PROFITS OR LOSS OF GOODWILL), REGARDLESS OF WHETHER SELLER (a) HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES OR (b) IS NEGLIGENT.

11. EXPORT RESTRICTIONS. Buyer acknowledges that export controls of the U.S. Government, and other governments, may apply in respect of each Product and any related software and technology, including technical information supplied by Seller or contained in documents (collectively "Items"). Such export controls may include, but are not limited to, the Export Administration Regulations of the U.S. Department of Commerce (the "EAR"), which may restrict or require licenses for the export of Items from the United States and their re-export from other countries. Buyer shall not export, re-export, distribute or supply any Item to (i) any country, person or entity, in each case, without first obtaining from the appropriate government agency any license required to do so lawfully; (ii) any person or entity in any country then the subject of a United States embargo, or any person or entity considered a part of the government of any such country or (iii) any person or entity who is involved in improper development or use of nuclear weapons, or of chemical/biological weapons (CBW) or missiles, or in terrorist activities. Buyer shall, if requested by Seller, provide information on the end user and end use of any Item exported or to be exported by Buyer. Buyer shall cooperate fully with Seller in any official or unofficial audit or inspection related to applicable export or import control laws or regulations, and shall indemnify and hold Seller harmless from, or in connection with, any violation of this Section by Buyer or its employees, consultants, or agents

12. INSURANCE. Seller will maintain and carry liability insurance which includes but is not limited to employer's liability, worker's compensation, general liability, public liability, property damage liability, product liability, completed operations liability and contractual liability in amounts set forth below with insurance companies rated B+ or better by "BEST" rating services. Insurance includes (a) Commercial general liability insurance for a limit of \$2,000,000 (two million) for each occurrence and \$4,000,000 (four million) in the aggregate, (b) Statutory workers' compensation and employer's liability insurance for a limit of \$1,000,000 (one million) and (c) Automobile liability of \$2,000,000 (two million) dollars.

13. MISCELLANEOUS. (a) Buyer may not delegate any duties nor assign any rights or claims hereunder without Seller's prior written consent, and any such attempted delegation or assignment shall be void. (b) The rights and obligations of the parties hereunder shall be governed by and construed in accordance with the internal laws of the Commonwealth of Massachusetts, without reference to its choice of law provisions. (c) In the event of any legal proceeding between the Seller and Buyer relating to this Agreement, neither party may claim the right to a trial by jury, and both parties waive any right they may have under applicable law or otherwise to a right to a trial by jury. Any action arising under this Agreement must be brought within one (1) year from the date that the cause of action arose. (d) The application to this Agreement of the U.N. Convention on Contracts for the International Sale of Goods is hereby expressly excluded. (e) In the event that any one or more provisions contained herein shall be held by a court of competent jurisdiction to be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall remain in full force and effect, unless the revision materially changes the bargain. (f) Seller's failure to enforce, or Seller's waiver of a breach of, any provision contained herein shall not constitute a waiver of any other breach or of such provision. (g) Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, *in vitro* diagnostic uses, *ex vivo* or *in vivo* therapeutic uses, or any type of consumption by or application to humans or animals. (h) Buyer agrees that all pricing, discounts and technical information that Seller provides to Buyer are the confidential and proprietary information of Seller. (i) Buyer agrees to (1) keep such information confidential and not disclose such information to any third party, and (2) use such information solely for Buyer's internal purposes and in connection with the Products supplied hereunder. Nothing herein shall restrict the use of information available to the general public. (j) Any notice or communication required or permitted hereunder shall be in writing and shall be deemed received when personally delivered or three (3) business days after being sent by certified mail (or by any nationally or internationally recognized carrier including DHL, FedEx or similar carrier), postage prepaid, to a party at the address specified herein or at such other address as either party may from time to time designate to the other. (k) Seller's employees will present Buyer at the end of each week, or at the completion of the job if less than one week, a field service report on which will be indicated the number of hours spent and the material used in completing the work. Buyer shall sign the field service report thus signifying approval of the time spent and material expense incurred on this work. If Buyer does not sign report or provide written objection within five (5) business days after receipt then the report shall be deemed as approved. (l) Seller hereby rejects and disclaims any rights of Buyer contained, or obligations imposed upon Seller, in any document provided, referenced or otherwise submitted by Buyer, in each case, that Seller has not expressly included in this Agreement or a writing manually executed by Seller (including, without limitation, any rights of Buyer in respect of designs, specifications, source code or intellectual property, owned, or licensed, by Seller; any rights to items or services not specifically identified in Seller's quotation; any audit rights or financial offset rights of Buyer; any penalties or liquidated damages imposed upon Seller; any obligation by Seller to comply with Health Insurance Portability and Accountability Act of 1996 (as amended), Current Good Manufacturing Practice regulations (as amended) or the requirements, as amended, of the Customs-Trade Partnership Against Terrorism; any obligation that Seller comply with any law that, under law, would not otherwise apply to Seller in respect of the transaction(s) contemplated hereby; any right of Buyer to withhold all, or any portion, of the purchase price of any Products or Services for any period of time; any right of Buyer, itself or through any third party, to remediate any defects in, replace or reperform, any Products or Services provided hereunder at Seller's cost or expense; any obligation of Seller to waive, or require its insurers to waive, any rights of subrogation; any obligation of Seller that would impair, restrict or prohibit Seller's ability to freely conduct any business with any person or in any geography or market, or any waiver by Seller of any right to enforce any of the terms hereof).

Technical Exceptions, Deviations and Clarifications

Note: This document is considered by Thermo Fisher to be an attachment to the specification documents. Exceptions to this document must be included in the contract or purchase order. The lack of references to this document in the purchase order will be interpreted by Thermo Fisher as full acceptance of interpretations and changes to the specifications detailed in this document.

The following table contains an item by item response to the specification submitted with your request for Proposal. If clarifying comments are necessary, they are directed at specific aspects of the specification. **Exceptions** are clearly noted by an "E" in the code column. **Deviations** from the specification are clearly noted by a "D" in the code column. **Clarifications** that state interpretations or offer alternate / additional scope from what would normally be provided are marked with a "C" in the code column.

Code	Specification Paragraph Title	Exceptions, Deviations and/or Clarifications
		Continuous Sulfur Dioxide (SO2) Analyzers DAQ18-4
C	General Requirements Section: 3.1.1	Thermo Scientific Model 43iQ SO2 Analyzer is offered.
C	General Requirements Section: 3.1.1.5	Thermo Scientific Model 43iQ has 6 x 3.5" color graphics display with touch screen interface.
C	General Requirements Section: 3.1.1.16	No specification listed. Based off of various averages range is 0.5ppb (300 second average).
C	General Requirements Section: 3.1.1.29	Thermo Environmental Instruments is proposing spare parts as required for the Model 43iQ Analyzer. Desiccant bags for the PMT is not applicable.

Thermo Scientific 43iQ

Sulfur Dioxide Analyzer—pulsed fluorescence



The Thermo Scientific™ 43iQ Sulfur Dioxide (SO₂) Analyzer utilizes pulsed fluorescence technology to measure the amount of sulfur dioxide in the air.

The pulsing of the UV source lamp serves to increase the optical intensity whereby a greater UV energy throughput and lower detectable SO₂ concentration are realized.

Reflective bandpass filters, as compared to commonly used transmission filters, are less subject to photochemical degradation and more selective in wavelength isolation. This results in both increased detection specificity and long term stability.



Non-Stop Intelligence

- Predictive Diagnostics
- Proactive Communication
- Personal Device Connectivity

The Thermo Scientific iQ Series Gas Analyzer provides a smart environmental monitoring solution designed for reliability, easy operation and proactive maintenance. Get more control over your instrument's performance, costs, workflow and data availability.



The iQ companion app for the iQ Series Gas Analyzer delivers the ultimate in ease of use and smart engineering. The iQ app allows for remote monitoring of iQ gas analyzers, simplified ways of contacting us and instant access to product resources.

Download the iQ app at thermofisher.com/iQapp

Thermo Scientific 43iQ Sulfur Dioxide Analyzer

Specifications	
Range	0-10 ppm, 0-25 mg/m ³
Extended ranges	0-100 ppm, 0-250 mg/m ³
Zero noise	1.0 ppm RMS (10 second averaging time) 0.5 ppm RMS (60 second averaging time) 0.25 ppm RMS (300 second averaging time)
Detection limit	2 ppb (10 second averaging time) 1 ppb (60 second averaging time) 0.25 ppb (300 second averaging time)
Zero drift	<0.5 ppb (24 hour)
Span drift	±0.5% full scale (24 hour)
Response time	60 seconds (10 second averaging time) 110 seconds (60 second averaging time) 320 seconds (300 second averaging time)
Linearity	±1% full scale
Flow rate	0.5 lpm (standard)
Interferences (EPA levels)	Less than lower detectable limit except for the following: NO < 3 ppb, M-Xylene < 1ppb, H ₂ O < 3% of reading
Operating temperature	0°-45°C
Power requirements	100-240 VAC 50/60Hz, 275 Watts
Size and weight	24 in (D) x 16.75 in (W) x 8.72 in (H), 37.1 lbs 609 mm (D) 425.45 mm (W) x 221.48 mm (H), 16.8kg
Analog I/O	4 isolated voltage inputs 0-10 V 6 isolated analog voltages outputs, with 4 selectable ranges 6 isolated analog current outputs, with 2 selectable ranges
Digital I/O	16 digital inputs (TTL) 8 solenoid driver outputs 10 digital reed relay contact outputs
Serial Ports	1 RS-232/485 port

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products. For more information on our comprehensive service solutions visit thermofisher.com/EMservice

USA

27 Forge Parkway
Franklin, MA 02038
Ph: (508) 520-0430
Fax: (508) 520-2800
orders.aqi@thermofisher.com

India

C/327, TTC Industrial Area
MIDC Pawane
New Mumbai 400 705, India
Ph: +91 22 4157 8800
india@thermofisher.com

China

+Units 702-715, 7th Floor
Tower West, Yonghe
Beijing, China 100007
Ph: +86 10 84193588
info.eid.china@thermofisher.com

Europe

Ion Path, Road Three,
Winsford, Cheshire CW73GA
UK Ph: +44 1606 548700
Fax: +44 1606 548711
sales.epm.uk@thermofisher.com

Ordering information

43iQ Sulfur Dioxide Analyzer

Choose from the following configurations/options to customize your own 43iQ Analyzer

1. Power Cord

A = 100-120 VAC, 50/60 Hz (NA)

B = 220 VAC, 50/60 Hz (CHN)

C = 220 VAC, 50/60 Hz (EU)

2. Communications

N = No I/O

A = Serial RS232/RS485

B = Analog or Digital

C = Serial, Analog and Digital

3. Case Configuration

N = No zero/span valves

A = Internal zero/span valves

B = Internal zero/span valves, internal permeation oven

Your Order Code: 43iQ –

--	--	--

Find out more at thermofisher.com/43iQ
thermofisher.com/iQSeries

ThermoFisher
SCIENTIFIC