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

State of West Virginia
Contract

Order Date: 09-21-2022

CORRECT ORDER NUMBER MUST APPEAR ON ALL PACKAGES, INVOICES, AND SHIPPING PAPERS. QUESTIONS CONCERNING THIS ORDER SHOULD BE DIRECTED TO THE DEPARTMENT CONTACT.

Order Number:	CCT 0313 0313 DEP2300000002 1	**Procurement Folder:**	1030855
Document Name:	AB Manager Lab Accreditation System, or Equal	**Reason for Modification:**	
Document Description:	AB Manager Lab Accreditation System, or Equal		
Procurement Type:	Central Contract - Fixed Amt		
Buyer Name:	Joseph E Hager III		
Telephone:	(304) 558-2306		
Email:	joseph.e.hageriii@wv.gov		
Shipping Method:	Best Way	**Effective Start Date:**	
Free on Board:	FOB Dest, Freight Prepaid	**Effective End Date:**	

VENDOR

Vendor Customer Code: VS0000041211
AQS, Inc.
2112 Deer Run Drive

South Weber UT 84405
US
Vendor Contact Phone: 8014761365 **Extension:**

Discount Details:

	Discount Allowed	Discount Percentage	Discount Days
#1	No	0.0000	0
#2	Not Entered		
#3	Not Entered		
#4	Not Entered		

DEPARTMENT CONTACT

Requestor Name: Jessica S Chambers
Requestor Phone: 304-926-0499
Requestor Email: jessica.s.chambers@wv.gov

23
FILE LOCATION _____

INVOICE TO

ENVIRONMENTAL PROTECTION
DIV OF WASTE AND WATER MGT

601 57TH ST SE

CHARLESTON WV 25304

US

SHIP TO

ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MGT

601 57TH ST SE

CHARLESTON WV 25304

US

9-29-2022 BOC

Total Order Amount:	$52,375.00

Purchasing Division's File Copy

ENTERED

JA 9.29.2022

PURCHASING DIVISION AUTHORIZATION	ATTORNEY GENERAL APPROVAL AS TO FORM	ENCUMBRANCE CERTIFICATION
DATE: 9-29-22	DATE:	Beverly Toler
ELECTRONIC SIGNATURE ON FILE	ELECTRONIC SIGNATURE ON FILE	DATE: 10-3-2022
	9/30/2022	ELECTRONIC SIGNATURE ON FILE

Extended Description:

The vendor, AQS Inc., agrees to enter into this contract with the agency, The West Virginia Department of Environmental Protection (WVDEP), to establish a contract for AB Manager Laboratory Accreditation Management System, or equal, per the specifications, terms an conditions, and the vendors submitted bid response dated 9/05/2022 all incorporated herein by reference and made apart hereof.

Line	Commodity Code	Quantity	Unit	Unit Price	Total Price
1	81162000	0.00000		0.000000	$37,375.00
Service From	**Service To**	**Manufacturer**		**Model No**	
2022-08-15	2023-08-14				

Commodity Line Description: Auto Lab Accreditation System, AQS AB Manager or Equal

Extended Description:

Vendor's bid for this item will include total cost for initial set-up, technical support, training; updates, enhancements and bug fixes for the initial year. Will also include maintenance and support for First Year.

Line	Commodity Code	Quantity	Unit	Unit Price	Total Price
2	81112201	120.00000	HOUR	125.000000	$15,000.00
Service From	**Service To**	**Manufacturer**		**Model No**	

Commodity Line Description: Custom Programming and Support

Extended Description:

Reference Specification 4.1.15.3 Vendor's bid will include total cost for any custom programming and support that may be requested over the course of the entire 5 year contract. Hours are estimated at 120 hours (for bidding purposes only). Vendor will only bill for actual hours pre-approved and used. Custom programming and support must be pre-approved in writing by a representative of the WV DEP.

GENERAL TERMS AND CONDITIONS:

1. CONTRACTUAL AGREEMENT: Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, 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: The Initial Contract Term will be for a period of _____ _____. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

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 three hundred sixty five (365) days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

☐ the contract will continue for _____ years;

☑ the contract may be renewed for four (4) successive one (1) 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).

☐ **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.

☐ **Construction/Project Oversight:** This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

☐ **Other:** Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

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/Award Document 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 of 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 in this section must be provided to the Purchasing Division by the Vendor as specified:

☐ **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 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

☐ **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 of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications 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 and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, 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, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

☑ **Commercial General Liability Insurance** in at least an amount of: one million ($1,000,000) per occurrence.

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

☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

☐ **Commercial Crime and Third Party Fidelity Insurance** in an amount of: _____ per occurrence.

☐ **Cyber Liability Insurance** in an amount of: _____ per occurrence.

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

☐ **Pollution Insurance** in an amount of: _____ per occurrence.

☐ **Aircraft Liability** in an amount of: _____ per occurrence.

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Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

9. WORKERS' COMPENSATION INSURANCE: 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.

☐ Liquidated Damages Are Not Included in this Contract.

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. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

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, included in the Contract, 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. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

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 regarding 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.

> **SUBCONTRACTOR COMPLIANCE:** 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. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

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.

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. 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.

31. 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.

32. 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.

SUBCONTRACTOR COMPLIANCE: 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. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. 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.

34. 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.

35. 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.

36. 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.

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming 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, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

38. 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.

39. 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.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, 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.

41. 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.

c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:

    1. 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

    2. 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.

42. 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.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least $1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work 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. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES – This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

Attachment 1 – Designated Contact and Certification

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.

(Name, Title) Joel Workman President

(Printed Name and Title) Joel Workman, President

(Address) 2112 Deer Run Drive, South Weber, Utah

(Phone Number) / (Fax Number) 801-476-1365

(email address) jworkman@aqsnet.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through *wv*OASIS, I certify that: I have reviewed this Solicitation/Contract 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/Contract 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.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

AQS, Inc.
(Company)

Joel Workman
(Authorized Signature) (Representative Name, Title)

Joel Workman, President
(Printed Name and Title of Authorized Representative) (Date)

801-476-1365
(Phone Number) (Fax Number)

jworkman@aqsnet.com
(Email Address)

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 Water and Waste Management (DWWM), to establish a contract for Automated Laboratory Accreditation and Monitoring System.

   CURRENT OPERATING ENVIRONMENT: The WVDEP and its Division of Water and Waste Management (DWWM) have a Laboratory Quality Assurance Program (staff of 4) that is responsible for accrediting environmental laboratories and ensuring the state receives accurate and reliable analytical data.

   Laboratories that are accredited must comply with federal and state regulations, follow approved testing methods, employ well-trained capable staff, and use equipment or instrumentation suited to the work they perform. Accredited laboratories are grouped into three categories: (1) Commercial – stand-alone laboratories testing samples for a fee, (2) Industrial – manufacturing company owned and operated laboratories, and (3) Municipal – laboratories associated with publicly owned treatment works operated by cities or public service districts.

   WVDEP personnel perform laboratory accreditation services to all divisions of WVDEP. The program is open to any environmental laboratory seeking to provide data to the WVDEP.

   The process begins when a laboratory submits an application. Once processed and fees are paid, laboratory performance is assessed through on-site inspection and evaluation of proficiency testing data and an assessment report is issued. The laboratory responds to the assessment report with proposed corrections. Once corrections are approved and verified, a laboratory may be accredited. Accredited laboratories are assigned a laboratory ID number and a certificate and accreditation scope (Attachment I) are generated. Laboratories are accredited for one year from the date of initial accreditation. Thereafter, the laboratory is re-assessed annually based on re-application and the scope of accreditation is modified according to the requested parameters listed in the renewal application.

   1. The current laboratory accreditation database is WVDEP's Environmental Resource Information System (ERIS.) ERIS was built in PowerBuilder on an Oracle database. This is the internal system of record for WVDEP, housing laboratory data, tracking laboratory milestones, and managing laboratory demographics and accreditation lists. ERIS can generate official correspondence. ERIS does not perform PT evaluations or assessments.
   2. New applicants must be setup as a Responsible Party in ERIS.

LEGISLATIVE MANDATE

WVDEP's Laboratory Quality Assurance Program is legislatively mandated to evaluate, certify, and accredit commercial, industrial, and municipal laboratories that perform testing under:

Environmental Laboratories Certification and Standards of Performance

§47-32-1. This rule governs the certification of laboratories conducting environmental analysis of waste and wastewater performed as required by rules or orders issued pursuant to the covered statutory programs. The rule establishes the provisions for obtaining and maintaining laboratory certifications and the criteria and procedures laboratories will be required to follow in analyzing samples.

The law establishes categories of certification and parameters for laboratories. It created minimum requirements, criteria, and procedures that the laboratories must follow. It also provided enforcement procedures to ensure that all accredited laboratories comply.

The mandate has been on the books since 2009, but currently, the laboratory accreditation still is done manually, without an automated System to receive and validate results. In 2019, WVDEP Cabinet Secretary Austin Caperton mandated a department-wide focus on efficiency. WVDEP's Laboratory Quality Assurance Program manages the accreditations of and assesses facilities across North America; therefore, online forms, mobile assessment tools, and a custom database are needed to automate and streamline the process.

WVDEP seeks to procure an existing product, AQS's AB manager or equal, with a proven record in this highly specialized field of laboratory accreditation. A successful engagement will require specification clarification meetings, customization of the product to the specifications in this document, and personalized training to the staff.

WVDEP uses the Agile methodology, and we will participate with the vendor in prioritizing work in a product backlog, if not defined herewith. At the end of the Discovery Phase, WVDEP expects the vendor to provide a more detailed functional specification for the features it will develop to satisfy the requirements of the engagement.

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 Services" means automation of the laboratory accreditation process as more fully described in these specifications.

2.2 "Pricing Page" means the pages, contained wvOASIS or attached hereto as Exhibit A, upon which Vendor should list its proposed price for the Contract Services.

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 "Analyte" means an element, ion, isotope, compound, or component of interest for testing purposes.

2.5 "Approved analytical methods" means those analytical or test methods cited in the Code of Federal Regulations as being approved by EPA or such other methods as shall be approved by the Secretary. Analytical methods reference TNI LAMs method and analyte codes, when available.

2.6 "ApplicationXtender (AX)" is a document management software being used for electronic file storage by the West Virginia Department of Environmental Protection (WVDEP)

2.7 "Assessor" means DEP laboratory program staff members who evaluate laboratory performance during on-site laboratory assessments and are users of the system.

2.8 "**Assessment**" means the evaluation or estimation of the performance of a laboratory by means of on-site inspection, PT performance evaluations, staff interviews, and review of quality assurance and quality control documentation

2.9" **Assessment reports**" are reports issued by DEP assessors to laboratories seeking to obtain or maintain accreditation(s) which identify findings and reference regulations and test method requirements

2.10 "Attachment I" scope of accreditation issued by the WV DEP which lists the categories and parameters accredited.

2.11 "Accreditation" means approval granted by the Secretary authorizing a laboratory to provide environmental compliance data.

2.12 "DWWM" means the Division of Water and Waste Management division within the West Virginia Department of Environmental Protection (WVDEP)

2.13 "EPA" means the United States Environmental Protection Agency

2.14"ERIS" means Environmental Resources Information System – An internal WVDEP database system (built with PowerBuilder on an Oracle database) for WVDEP staff to enter, store, track and report environmental data

2.15"ESS" means Electronic Submission System – the preparation, delivery, review, correction, approval, and publication of certification application data by using web-based technologies to integrate industry, regulators and the public with a common interface. AST registrations are currently entered through ESS.

2.16"FISMA" means Federal Information Security Management Act of 2014– a comprehensive framework to protect government information, operations, and assets against natural or man-made threats. FISMA was signed into law as part of the Electronic Government Act of 2002 and amended in 2014.

2.17"ISO" means International Organization for Standardization accreditation methods and standards

2.18"LQAP" means Laboratory Quality Assurance Program of the Division of Water and Waste Management within the West Virginia Department of Environmental Protection

2.19"METHOD" means the scientific technique(s) used to perform testing or analyses of an environmental sample

2.20"MDL" means Method Detection Limit as defined in 40 CFR 136, appendix B.

2.21"National Environmental Laboratory Accreditation Council (NELAC)" means the National organization for standardization of environmental laboratory accreditation and related issues

2.22 "NIST" means the National Institute of Standards and Technology and is a physical sciences laboratory, and a non-regulatory agency of the United States Department of

Commerce. Its mission is to promote innovation and industrial competitiveness. The NIST Risk Management Framework (RMF) provides a comprehensive, flexible, repeatable, and measurable 7-step process that any organization can use to manage information security and privacy risk for organizations and systems and links to a suite of NIST standards and guidelines to support implementation of risk management programs to meet the requirements of the Federal Information Security Modernization Act (FISMA).

2.23"Parameter(s)" means an analyte or group of analytes for which accreditation is offered by a testing method within a given matrix and/or category.

2.24"PT" means proficiency test. Proficiency testing is performed by laboratories via accredited third-party proficiency test sample providers. TNI proficiency testing requirements are incorporated by reference in section 3.10.8 of §47-32.

2.25"PT SAMPLE" is a sample containing a known quantity of specific parameters used in part to evaluate the performance of a laboratory.

2.26"PDF" means Portable Document Format – a file format used to present documents in a manner that is independent of application software, hardware, and operating systems.

2.27"Responsible Party" means any business or individual licensed to do business with WVDEP and who will be regulated by WVDEP.

2.28 "SAS" (Software as a service) refers to a method of software delivery and licensing in which software is accessed online via a subscription, rather than bought and installed on individual computers.

2.29"SME" (Subject Matter Expert) is an individual with a deep understanding of a process, function, or environmental regulation or assessment.

2.30"TNI Standards" The NELAC Institute (TNI) accreditation methods from TNI Laboratory Accreditation Management System (LAMS)

2.31 "User" means DEP personnel who access the system by entering username and login credentials. User types are "admin" and "user". Assessors are users during on-site inspections.

2.32 "Voluntary Consensus Standards (VCSs)" are standards established by domestic or international consensus standards organizations using agreed upon procedures. Examples are TNI, WEF, APHA, AWWA, ISO, etc.

2.33"WVDEP" means the West Virginia Department of Environmental Protection

2.34"WVOASIS" means the Enterprise Resource Planning (ERP) System used by the State of West Virginia for statewide administrative functions such as financial management, procurement, asset management, etc.

3. **QUALIFICATIONS:** Vendor, or Vendor's staff if requirements are inherently limited to individuals rather than corporate entities, shall have the following minimum qualifications:

3.1 Prior to award, the vendor must provide WVDEP with a list of references for at least three (3) other U.S. states who have used a laboratory accreditation system that the vendor has developed. Contacts for these references must be provided as well. Compliance with experience requirements will be determined prior to contract award by the State through references provided by the Vendor with its bid or upon request, through knowledge or documentation of the Vendor's past projects, or some other method that the State determines to be acceptable. Vendor should provide a current résumé which includes information regarding the number of years of qualification, experience and training, and relevant professional education for each individual that will be assigned to this project. Vendor must provide any documentation requested by the State to assist in confirmation of compliance with this provision. References, documentation, or other information to confirm compliance with this experience requirement are preferred with the bid submission but may be requested after bid opening and prior to contract award.

3.2 The vendor's team assigned to WVDEP must have at minimum 10 years of combined experience in the fields of environmental laboratory analysis and accreditation.

3.3 Prior to award, the vendor must provide proof of experience developing systems to help laboratory accreditation bodies ensure that environmental laboratories are compliant with national accreditation standards such as TNI.

4 **MANDATORY REQUIREMENTS:**

4.1 Mandatory Contract Services Requirements and Deliverables: Contract Services must meet or exceed the mandatory requirements listed below.

4.1.1 Automated Laboratory Accreditation and Monitoring System, AB Manager or equal

4.1.1.1 The vendor must provide an existing commercial off the shelf customizable accreditation management SAS or software. The goal is to start with an existing system that can be configured to the specific needs and workflows matching WVDEP's business processes to automate the laboratory accreditation process.

4.1.1.2 The product must be able to track all unique parameters for which WVDEP offers accreditation, currently approximately 5,950. Each parameter will consist of matrix (non-potable water or solid), regulatory program (Clean Water Act "CWA", SW-846, etc.), testing method (~1,300) and revision, and analyte. The system will incorporate TNI matrix, method, and analyte codes from TNI LAMs and must allow updates to stay current with TNI databases. The WVDEP parameter table must be easy to maintain (add, inactivate, or delete parameters) and must track individual laboratory scopes of accreditation. Included in Attachments A & B are relevant DEP and TNI LAMs accreditation and parameter lists.

4.1.1.3 The product must track all program laboratories (~97) including laboratory details, requested parameters, accredited parameters, proficiency testing results, laboratory PT evaluations, assessment progress, accreditations, and other related information. The system must allow for addition, activation, and de-activation of accredited facilities.

4.1.1.4 The product must track laboratory demographic information including laboratory name, status (inactive/active), lead assessor, lab type (municipal, industrial, commercial), addresses, key personnel, laboratory IDs (EPA and WV), tax ID, initial accreditation date, whether commercial samples are accepted, notes, latitude/longitude-based mapping, billing information and additional unique features related to each laboratory.

4.1.1.5 For each laboratory, the product must allow WVDEP to easily maintain requested parameters, parameter start date, and approval status (accredited, not accredited) for each parameter. The system will also allow creation and re-creation of accreditation scopes with unique document numbers. The system must allow for easy maintenance of laboratory information including, but not limited to facility name, location, contact information, physical and mailing addresses, etc.

4.1.1.6 The product must support proficiency test (PT) importing and evaluation in accordance with WVDEP and TNI rules and requirements. The system will be capable of easily staging, validating, and importing properly formatted data files (.CSV) containing results from laboratory PT studies. The system will automatically assign PT data to the correct laboratory and requested parameter within the laboratory. A PT summary will be provided for each requested parameter that 1) summarizes the most recent three PT studies including study result, 2) determines the months between each study and the months since the most recent study, 3) determines if evaluation criteria have been met for each of the most recent three 6-month intervals, and 4) provides an overall score for the parameter (Pass: 3 of 3, Pass: 2 of 3, Fail: 1 of 3, Fail: 0 of 3, or no PT submitted). The system must also indicate whether the analyte is included in the TNI Fields of PT table. Mandatory at award, the product must support evaluation features, such as user notification when parameter PT evaluations result in a change to parameter status (pass to fail, fail to pass) and detailed exporting of PT evaluation data. PT.CSV files are individual laboratory or multi-laboratory within the same .CSV file and vary from a single row to thousands of rows with multiple columns. There are currently seven approved PT providers which report PT. CSVs to WVDEP in a variety of formats. The system must be able to import all PT vendor .CSV files with little to no modification by users. Examples of PT .CSV files and format requirements are included Attachments B & C as well as WV DEP and TNI PT requirements.

4.1.1.7 The product must include a module for laboratory assessments. Assessments must include customizable milestones for accreditation

progress tracking, on-site details, and laboratory specific checklists unique to annual requested scope. The system must allow WVDEP to build and maintain program-specific and method-specific checklist templates. These checklists must be deployable on any web-enabled laptop or tablet. The system must be capable of compiling assessment checklist findings, comments, and recommendations from all utilized checklists a customizable assessment report. See attachments F & G for examples of checklist templates and assessment reports.

4.1.1.8 Within the first six months of award, the product must be able to create custom managerial reports (lab status, assessment status, etc.) and generate application invoices based on current travel fees, WV 47 CSR 32 categories, and certification fee tables. WV 47 CSR 32 fee tables are included in Attachment D.

4.1.1.9 Data Migration: Existing laboratory data (laboratory demographics, accreditation scopes, PT data) which is necessary for LQAP day-to-day function(s) must be integrable into the System upon award. Many of the processes outlined in this specification are currently manual or semi-automated processes. Therefore, WVDEP does not expect the vendor to migrate historical data into the new system. Processes should be outlined so that WVDEP staff can migrate data efficiently, upon notice to proceed using existing data from Google and Microsoft spreadsheets & text documents, .CSV files, etc. Examples of data are included in Attachment E.

4.1.1.10 Iterative Development and Rolling Product Launches - WVDEP requires the Vendor to follow the Agile/Scrum development methodology, which places greater emphasis on valuable working functionality than meetings and documentation. The Scrum methodology as defined by the Scrum Alliance: https://www.scrumalliance.org/about-scrum/overview

4.1.1.10.1 Scrum is an Agile framework that works by delivering large projects in small chunks--bite-sized product increments that a cross-functional team can begin and complete in one, short timeboxed iteration. Each iteration is called a sprint. As each

product sprint is completed, the team reviews the functionality and then decide what to create next based on what they learned and the feedback they received during the review. These frequent inspect and adapt cycles reduce waste and minimize risk.

4.1.1.10.2 WVDEP will provide a product owner to work in concert with the Vendor's Scrum Master. The WVDEP Product Owner role will coordinate WVDEP feedback, internal testing and the participation of subject matter experts and stakeholders.

4.1.1.10.3 WVDEP requires iterative and incremental development process during which there will be multiple releases of functionality that will build on one another so that we may see value from our investment as soon as possible.

4.1.1.10.4 WVDEP's clients from the various DWWM programs in this specification require their systems to be developed simultaneously, on parallel tracks.

4.1.1.10.5 After the Discovery Phase, WVDEP must work with the vendor to launch the off-the-shelf system as soon as possible. We will work with the vendor to identify key features we can launch quickly so that we can begin getting benefits from the system.

4.1.1.10.6 The WVDEP team will collaborate with the vendor to prioritize functionality and release cycles.

4.1.1.10.1 WVDEP will work with the vendor to implement, develop, and customize critical components as soon as possible. We seek to work with the vendor to implement key features (Accreditation database management, PT evaluation, and Assessment modules) that we can launch within 30 days of notice to proceed.

4.1.1.10.2WVDEP requires the vendor to use the Agile/Scrum development methodology, which places greater emphasis on valuable working functionality than meetings and documentation. WVDEP seeks an iterative and incremental development process

4.1.2 Avoid Duplication of Systems or Data: WVDEP's goal is to use technology tools that are best suited for each task. Also, we do not want to create a

situation where there is duplicate data or records in multiple systems. The following three systems will be used for document management and accounting, and we do not seek the laboratory accreditation system to duplicate these features.

4.1.2.1 ApplicationXtender is WVDEP's document repository – therefore, vendor must leverage it to store the related or supporting documents that accompany applications and assessments. As a mandatory, the vendor must, at award, ensure that records generated in the system are retained and exportable in format(s) (pdf, .docx, .xlsx, etc.) that allow for import into Application Xtender

4.1.2.2 WVDEP has a public website (https://dep.wv.gov/Pages/default.aspx) that is built on a SharePoint document management system. Therefore, if there is environmental program description, content or regulatory information is available for the public, this will be managed and housed on the public website. As a mandatory, the vendor must ensure that external content such as publicly available reports on lab demographics, contact information, and accredited parameter lists are accessible via weblink which can be listed on the DEP public website. Submitted bids must include documentation to verify that this requirement can be met.

4.1.2.3 The State Treasurer's Office collects all online credit card and bank transfer payments. Within the first year of award, the product must calculate applicable fees and take transactions up to the point of all items in a "shopping cart" and pass necessary information to the Treasurer's office for payment.

4.1.3 Online Content Management Requirements – The accreditation management system must have content management tools that support non-technical WVDEP program staff with maintaining laboratory accreditation details and status.

4.1.3.1 The system must be capable of providing an online or electronic customizable application.

4.1.3.2 The system must have a built-in workflow for assessments that tracks and indicates where the user is in the process.

4.1.3.3 The system must allow users to query publicly available information such as, but not limited to, accredited laboratories and contact information, accredited parameters, available parameters, etc. See 4.1.2.2.

4.1.3.4 The system must be capable of storing and exporting or downloading all system-generated documents including, but not limited to certificates, accreditation scopes, applications, invoices, assessment data (details and checklists) and assessment reports.

4.1.4 Online Features: The system must support submissions for applications, requests, and complaints from regulated entities, the public, or other interested parties. Public-facing forms are not required initially for this accreditation management system. Public facing forms must comply with the Americans with Disabilities Act (ADA) Standards for Accessible Design and Section 508 of the Rehabilitation Act Amendments. These standards state that all electronic and information technology must be accessible to people with disabilities.

4.1.5 Data Management and Analysis

4.1.5.1 The vendor is responsible for all research and method development required to meet the specifications to assure that imported data is interpreted correctly by the system.

4.1.5.2 The system must allow tracking by parameter. PT results are applied by matrix, analyte, and technology. If a PT result fails for a given technology, that result will be applied to other parameters using the same matrix, analyte, and technology.

4.1.5.3 The system must allow updates to changing editions of methods and reference documents.

4.1.5.4 The system must interface with the laboratory applications by importing the application and cross-referencing against:

4.1.5.4.1 Active accreditation scope to determine if anything has changed.

4.1.5.4.2 Current PT evaluations on file to determine evaluation status.

4.1.5.4.3 Current accreditation scope for the applicant and, if in good standing, generates a certificate and Attachment I (scope of accreditation). See Attachment G for examples.

4.1.5.4.4 The system must import PT data from approved PT providers and match it to accredited laboratories in the database.

4.1.5.4.5 The system must perform evaluations to identify any parameters that are not in good standing

4.1.5.4.6 The process for electronic importing of PT results must specifically identify any analytes or methods that fail to be imported correctly for the PTs. The reason for the import failure must be identified in the report.

4.1.5.4.7 The system must support the export of data to the TNI national LAMS database in the correct format.

4.1.6 On Site Laboratory Assessments

4.1.6.1 The system must include a mobile assessment module that pre-populates assessment checklists based on requested parameters and allows assessors to perform assessments using a tablet to record responses and collect data in either online or in offline mode when there is no data connectivity. The mobile assessment module must support two-way communication and data integration with the main system.

4.1.6.2 The system must support offline capability (as well as wired or wireless) to send data and information from the on-site assessment checklists and format it into a final report template of findings that can be sent to the laboratory seeking accreditation.

4.1.6.3 The system must generate assessment modules for assessors to have during on-site inspections. The assessment module will include the current application, checklists for requested parameters, previous

year(s) assessment report and associated corrective actions. The team prepares the custom assessment package for each location based on requested parameters.

4.1.6.4 The system must incorporate assessment checklists from the laboratory's requested parameters to produce a specific on-site assessment package that can be accessible on a portable tablet (iPad, etc.) for use during the on-site assessment of the accredited laboratory. Checklists are launched from the assessment module as new windows or tabs and document laboratory assessment responses.

4.1.6.5 Assessment checklists must be generated in or imported into the system and housed in the system. Assessment checklists are created and curated by DEP staff using .CSV templates. LQAP's goal is to convert existing checklists and manage all checklists in the system. Examples of an excel assessment checklist, .CSV converted checklist for the same method, and how a .CSV checklist might import and function within the system are included in the Attachment F for reference.

4.1.6.6 At the end of the assessment, the system must generate a preliminary report based on checklist responses. The report would populate all lines marked with a "no" and include any comments, if entered from all assessment checklists, into a draft report.

4.1.6.7 The system must allow the users to create new checklists or modify existing ones. It is not uncommon for laboratories to change which test methods they may be using. If the EPA updates approved methods, the laboratory may need to be accredited in the newer method or method revision.

4.1.6.8 The system must allow assessors to jump from checklist to checklist or from section to section based on the conditions at the site. Assessors do not have to follow prescriptive assessment form steps or wizards.

4.1.6.9 The system must enable WVDEP users to design and maintain assessment checklists. The system must summarize findings based on

checklist question responses and allow assessors to take and attach multiple photos and add comments into checklists.

4.1.6.10 The mobile assessment module must feature a work queue of all assessments currently assigned to the assessor – past, started/active and planned. The system must list percentage completion status bars for all checklists within a given assessment.

4.1.6.11 The system must allow supervisors to manage and present a queue of pending assessments. Assessors may self-assign or pull assignments from a queue of work

4.1.6.12 Mobile assessment tool must allow the assessor to generate findings and export them in .CSV format. Additionally, the final assessment report must be generated on letterhead in Portable Document Format (PDF).

4.1.6.13 During the assessment, the assessor must be able to access the camera of the tablet device to take photos or upload photos from a different data source: cite findings either manually or automatically based on answers provided: add comments and recommendation comments and provide custom instructions.

4.1.6.14 The system must allow the data collected during the assessment to be pushed back into the main system, update assessment data, automatically create finding records and make sure that any other integrated data are updated with data collected during the assessment.

4.1.6.15 The system must support conducting and completing a mobile assessment on a tablet in the field and the mobile tool must synchronize the completed assessment data or report back to the main system. The mobile system must automatically detect data connections to synchronize data transmissions back to the main system.

4.1.6.16 The system must support WVDEP staff generating a plan for future assessments by selecting sites, evaluation types and designated workgroups or staff assignments.

4.1.6.17 Once subordinate assessments are completed, the system must notify the supervisor that the finalized assessment report is ready for review and allow for approval.

4.1.7 Fee Calculation and Invoicing

4.1.7.1 The system must calculate and create invoices for laboratory accreditation fees.

4.1.7.2 All laboratories have different accreditation dates based on a year from their initial or previous accreditation date. The system must track and provide reports on this.

4.1.7.3 There is a six-month window prior to the accreditation expiration. System must generate an ad hoc report for application renewal notifications to the regulated laboratory at this point because the team must start working with these facilities to begin the renewal process.

4.1.7.4 The system must include a fee table for out-of-state laboratories that must pay the team's travel fees to conduct assessment. It is a flat rate that is billed if the laboratory is outside of the zone structure. WVDEP may schedule an assessment, but it will not perform the on-site assessment if the laboratory has not paid all fees prior to.

4.1.8 Management Reports

4.1.8.1 The system must track the following for each facility:

- Laboratory accreditation status
- Parameter list
- Contact information

4.1.8.2 The system must generate exportable report(s) for PT evaluations for each facility which includes Study Matrix, Study Number, Close Date, EPA Lab Code, TNI Method Code, TNI Analyte Code, Technology, Evaluations, PT Status (Pass/Fail on 2003 PT rules) changes (historical pass to fail, fail to pass with date and time stamp).

4.1.9 System Alerts and Notification Requirements

4.1.9.1 PT evaluation notices, for example. System must allow internal system users to be able to receive notifications or reminders of upcoming reports based on the schedule specified in a certification or compliance action.

4.1.10 System Dashboard

4.1.10.1 The system dashboard will list all program laboratories, the most recent Attachment I expiration date, and the progress of all assessments for each laboratory

4.1.10.2 Other dashboard components may include certificate status, recent PT failures, overdue assessment milestones, or other helpful metrics.

4.1.11 WVDEP System Integration Requirements

4.1.11.1 The Laboratory Quality Assurance Program team seeks to improve transparency and expand the information available to the public. The system will allow provide a public facing website to allow the public to search accredited laboratories and the parameters for which they are approved.

4.1.12 Security Requirements – The system must:

4.1.12.1 Generate user accounts for new users.

4.1.12.2 Support authorizing WVDEP staff to have different levels of access/security to the system based upon roles. Each staff member must be provided with a user account. Accounts are designated as user and administrator by program management.

4.1.12.3 Facilitate registration information, including facility ID, name, address, coordinates, responsible party and associated contacts to be accessible by WVDEP personnel with only specified personnel capable of making changes to the application data.

4.1.12.4 Provide user accounts with login and password for internal users.

4.1.12.5 Let admin users reset passwords for regular users or remove users from the system. A list of admin users and regular users will be provided to the vendor for reference prior to deployment of the system.

4.1.12.6 Limit access to screens, reports, applications, menus, fields, etc. to the appropriate internal staff as determined and assigned by WVDEP Management.

4.1.12.7 Audit trail/time stamps for data input, modifications, reviews, and changes.

4.1.12.8 Encrypt all transactions that involve financial or personal identifiable information – both in transit and at rest.

4.1.12.9 The vendor must have a process for tracking, testing, and implementing solutions to system bugs and deficiencies.

4.1.12.10 The vendor must notify and consult with WVDEP when security risks or issues are identified per the Software as a Service Addendum.

4.1.12.11 The vendor must have the capability and tools for detecting, reporting, and responding to security incidents so that risks are mitigated before substantial damage is done.

4.1.12.12 During system implementation, the vendor must participate in web application configuration, testing, and reporting efforts in weekly meetings with WVDEP information technology staff.

4.1.12.13 The vendor must release security patches or upgrade migration services in response to security vulnerabilities identified in WV Office of Technology monthly vulnerability scans within ninety (90) days of notice.

4.1.12.14 If the application is hosted at the vendors facility or in 3rd party or a cloud-hosting environment, then the system must comply with best practices for information security. The Federal Information Security Management Act and National Institute of Standards, special publication 800-53 latest version.

4.1.12.15 If the application is hosted at the vendor's facility or in 3rd party or a cloud-hosting environment, the vendor must comply with WVDEP's privacy policy as posted at:

http://dep.wv.gov/SiteCollectionDocuments/DEP%20Privacy%20Policy20Notice.pdf

4.1.12.16 If the application is hosted at the vendor's facility or in 3rd party hosting environment or a cloud hosting environment, then the vendor must notify WVDEP at the point of discovery and fully participate in WVDEP's incident response protocol as published at:

https://privacy.wv.gov/incidentresponse/Pages/default.aspx

4.1.12.17 This means following all directions and requests from WVDEP's Privacy officer and division privacy officers in the department.

4.1.12.18 As part of the quote, WVDEP requires the vendor to state how it complies with the standards to manage the project, included with the price.

4.1.13 Performance Requirements – The system must accommodate a potential for several simultaneous users.

4.1.13.1 At a minimum, ninety-five (95) % of internal users shall be able to successfully submit registrations, applications, and/or reports without errors on their first attempt.

4.1.13.2 Multiple users must be able to access the database at the same time to upload or download data from the database without significantly slowing down the system.

4.1.13.3 Multiple users shall be able to view but not update data at same time to prevent data corruption.

4.1.13.4 The system shall allow the ability to upload, download, and save images and documents to allow storage and retrieval of relevant assessment documents in the system.

4.1.13.5 The system shall display confirmation message to users within an average of five (5) seconds and a maximum of ten (10) seconds after the user submits information to the system.

4.1.13.6 Assessments, associated documents, and reports must upload and/or download to and from the system within an average five (5) seconds and a maximum of ten (10) seconds after the user information to the system and an export error rate of < 2%.

4.1.14 Audit Requirements – WVDEP requires the system to keep an audit trail of all transactions including who changed what, when to what for every transaction. This audit trail may be in the form of audit tables, electronic "snapshots," or non-editable documents such as pdf.

4.1.15 Post-Launch Support and Maintenance Requirements

4.1.15.1 The vendor is responsible for set up, installation, and customization required to meet specifications, and virtual training of four (4) WVDEP laboratory personnel. Once key components are developed, the vendor must provide an instructional manual for product users. Updates to product functionality must be accompanied by updates to the instruction manual.

4.1.15.2 The vendor must provide software support for the initial year that includes software support with a maximum seventy-two (72) hour response time, including the option for a 2nd, 3rd, 4th, and 5th year extended support.

4.1.15.3 The vendor must provide custom programming and support over the life of the contract on request. Custom programming and support may be requested by the WV DEP for features that are unique to a single user or new features that are needed on a rush basis. Custom

programming and support may be user-specific features or reports that require custom programming. WV DEP has estimated that approximately one hundred twenty (120) hours will be needed for custom programming and support.

4.1.15.4 Any custom programming and support must be pre-approved in writing by a representative of the WV DEP. Vendor's bid must include hourly rates custom programming and support.

4.1.16 Laboratory Accreditation and Mobile Assessment System - Overall NIST FISMA Risk Management Score – MEDIUM See Attachment H for detailed breakdown.

4.1.17 WVDEP Expectations for Best Practice: A System development life cycle process provides the foundation for the successful development, implementation, and operation of organizational systems. To apply the required security and privacy controls within the System development life cycle requires a basic understanding of information security and privacy, threats, vulnerabilities, adverse impacts, and risk to critical missions and business functions. The security engineering principles help individuals properly design, code, and test systems and System components. Organizations include qualified personnel including, for example, chief information security officers, security architects, security engineers, System security officers, and chief privacy officers in System development life cycle processes to ensure that established security and privacy requirements are incorporated into organizational systems. It is also important that developers include individuals on the development team that possess the requisite security and privacy expertise and skills to ensure that the needed security and privacy capabilities are effectively integrated into the System. Role-based security and privacy training programs can ensure that individuals having key security and privacy roles and responsibilities have the experience, skills, and expertise to conduct assigned System development life cycle activities. The effective integration of security and privacy requirements into enterprise architecture also ensures that important security and privacy considerations are addressed early in the System life cycle and that those considerations are directly related to organizational mission and business processes. This process also facilitates the integration of the information security and privacy architectures into the

enterprise architecture, consistent with risk management strategy of the organization. Because the development life cycle of a System involves multiple organizations, including, for example, external suppliers, developers, integrators, and service providers, it is important to recognize that acquisition and supply chain risk management functions and controls play a significant role in the overall effective management of the System during that life cycle.

4.1.18 Project and System Documentation – The vendor must:

4.1.18.1 Facilitate discovery meetings at a frequency to be mutually agreed to and document the project with:

- Business requirements, business process flow diagrams, and functional requirements
- Requirement traceability throughout the project to assure the testing and delivery of all requirements
- Client dashboards or reports with project status artifacts, including burn down charts
- Issue logs and defect tracking for quality assurance

4.1.18.2 Provide documentation prior to project close for the system that describes:

- Secure configuration, installation, and operation of the system, component, or service
- Effective use and maintenance of security and privacy functions and mechanisms. Known vulnerabilities regarding configuration and use of administrative or privileged functions

4.1.18.3 Provide user documentation for the system prior to project close that describes:

- User-accessibility security and privacy functions and mechanisms and how to effectively use those functions and mechanisms
- Methods for user interaction, which enables individuals to use the system in a more secure manner and protect individual privacy
- User responsibilities in maintaining the security of the system and privacy of individuals

4.1.18.4 WVDEP Expectations for Best Practice: This control helps organizational personnel understand the implementation and operation of security and privacy controls associated with systems, System components, and System services. Organizations consider establishing specific measures to determine the quality and completeness of the content provided. System documentation may be used, for example, to support the management of supply chain risk, incident response, and other functions. Personnel or roles requiring documentation may include, for example, System owners, System security officers, and System administrators. Attempts to obtain documentation may include, for example, directly contacting manufacturers or suppliers and conducting web-based searches.

4.1.18.5 Security and Engineering Practices – The vendor must document and track security requirements, including specification, design, development, implementation, and modification of the system and system components.

4.1.18.6 WVDEP Expectations for Best Practice: The application of systems security and privacy engineering concepts and principles help to develop trustworthy, secure systems and System components and reduce the susceptibility of organizations to disruptions, hazards, threats, and creating privacy-related problems for individuals. Examples of these concepts and principles include, developing layered protections; establishing security and privacy policies, architecture, and controls as the foundation for design and development; incorporating security and privacy requirements into the System development life cycle; delineating physical and logical security boundaries; ensuring that developers are trained on how to build secure software; tailoring security and privacy controls to meet organizational and operational needs; performing threat modeling to identify use cases, threat agents, attack vectors and patterns, design patterns, and compensating controls needed to mitigate risk. Organizations that apply security and privacy engineering concepts and principles can facilitate the development of trustworthy, secure systems, System components, and System services; reduce risk to acceptable levels; and make informed risk management decisions.

Security engineering principles can also be used to protect against certain supply chain risks including, for example, incorporating tamper-resistant hardware into a design.

4.1.18.7 External System Services – The vendor must:

4.1.18.7.1 Require that providers of external system services comply with organizational security and privacy requirements

4.1.18.7.2 Define and document organizational oversight and user roles and responsibilities about external system services

4.1.18.7.3 Employ effective methods to monitor security and privacy control compliance by external service providers on an ongoing basis

4.1.18.7.4 Employ effective methods to monitor security and privacy control compliance by external service providers on an ongoing basis

4.1.18.7.5 Identify functions, ports, protocols, and services

4.1.18.8 WVDEP Expectations for Best Practice: External System services are those services that are implemented external to authorization boundaries of organizational systems. This includes services that are used by, but not a part of, organizational systems. Organizations establish relationships with external service providers in a variety of ways including, for example, through business partnerships, contracts, interagency agreements, lines of business arrangements, licensing agreements, joint ventures, and supply chain exchanges. The responsibility for managing risks from the use of external System services remains with authorizing officials. For services external to organizations, a chain of trust requires that organizations establish and retain a level of confidence that each provider in the consumer-provider relationship provides adequate protection for the services rendered. The extent and nature of this chain of trust varies based on the relationships between organizations and the external providers. Organizations document the basis for trust relationships so the

relationships can be monitored over time. External System services documentation includes government, service providers, end user security roles and responsibilities, and service-level agreements. Service-level agreements define expectations of performance for implemented security and privacy controls; describe measurable outcomes and identify remedies and response requirements for identified instances of noncompliance. Additionally, the Vendor must identify information from external service providers regarding the specific functions, ports, protocols, and services used in the provision of such services can be particularly useful when the need arises to understand the trade-offs involved in restricting certain functions/services or blocking certain ports/protocols.

4.1.18.9 Developer Configuration Management – The vendor must:

4.1.18.9.1 Perform configuration management during system development

4.1.18.9.2 Document, manage, and control the integrity of changes to best practice

4.1.18.9.3 Implement only organization-approved changes to the system, component, or service

4.1.18.9.4 Document approved changes to the system, component, or service and the potential security and privacy impacts of such changes

4.1.18.9.5 Track security flaws and flaw resolution within the system, component, or service, and report findings to the WVDEP development team

4.1.18.10 Developer Security Testing – The vendor must:

4.1.18.10.1 Create and implement a security assessment plan

4.1.18.10.2 Perform unit, integration, system, and regression testing

4.1.18.10.3 Produce evidence of the execution of the security assessment plan and the results of testing

4.1.18.10.4 Implement a verifiable flaw remediation process

4.1.18.10.5 Correct flaws identified during security testing

4.1.18.11 WVDEP Expectations for Best Practice: Developmental security testing confirms that the required security controls are implemented correctly, operating as intended, enforcing the desired security policy, and meeting established security requirements. Security properties of information systems may be affected by the interconnection of System components or changes to those components. These interconnections or changes (e.g., upgrading or replacing applications and operating systems) may adversely affect previously implemented security controls. This control provides additional types of security testing/evaluation that developers can conduct to reduce or eliminate potential flaws. Testing custom software applications may require approaches such as static analysis, dynamic analysis, binary analysis, or a hybrid of the three approaches. Developers can employ these analysis approaches in a variety of tools (e.g., web-based application scanners, static analysis tools, binary analyzers) and in source code reviews. Security assessment plans provide the specific activities that developers plan to carry out including the types of analyses, testing, evaluation, and reviews of software and firmware components, the degree of rigor to be applied, and the types of artifacts produced during those processes. The depth of security testing/evaluation refers to the rigor and level of detail associated with the assessment process (e.g., black box, gray box, or white box testing). The coverage of security testing/evaluation refers to the scope (i.e., number and type) of the artifacts included in the assessment process. Contracts specify the acceptance criteria for security assessment plans, flaw remediation processes, and the evidence that the plans/processes have been diligently applied. Methods for reviewing and protecting assessment plans, evidence, and

documentation are commensurate with the security category or classification level of the information System.

4.2 Acceptance of the system – Acceptance of the system shall be defined as successful demonstration and testing of all system requirements including training, with the ability for all users to navigate and utilize the system to perform their roles. The Agency with the Vendor's acceptance will issue a written letter and Change Order to WV Purchasing Division as formal Acceptance of the system. Upon mutual agreement of Acceptance by both the Agency and Vendor, the change order issued by WV Purchasing will start the First-Year term for maintenance, support, warranty and set the dates for future renewals.

4.3 End of Contract – If this RFQ results in continuing payment for software as a service then Section 4.3 applies.

4.3.6 At the end of the contract the vendor must export all data in a format in any of this list of formats: Comma Separated Values, Tab Separated Values, Oracle Dumps, SQL Server Backups, Oracle RMAN backups, JSON, XML. Other formats may be used if agreed upon by DEP Chief Technology Officer and the vendor.

5 CONTRACT AWARD:

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

5.1.1 Evaluation will be the **TOTAL BID AMOUNT** for all items requested. The awarded contract will be the first (1) year access, SAS/Software Licenses, customization, and Support Services.

5.1.2 Renewal options for the SAS or software support for years 2, 3, 4, and 5 will be initiated by the Agency, agreed to by the vendor, and processed by the West Virginia Purchasing Division as Change Orders for subsequent years.

5.1.3 Vendor should provide with their bid a copy of any and all SAS or 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 contract is issued.

5.1.4 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 contract is issued.

5.2 Pricing Page: Vendor should complete the Pricing Page by entering their pricing information into wvOasis. 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 should type or electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes by sending an email request to the following address: joseph.e.hageriii@wv.gov

6. **PERFORMANCE:** Vendor and Agency shall agree upon a schedule for performance of Contract Services and Contract Services Deliverables, unless such a schedule is already included herein by Agency. In the event that this Contract is designated as an open-end contract, Vendor shall perform in accordance with the release orders that may be issued against this Contract.

7. **PAYMENT:** Agency shall pay payments as shown below for all contract services performed and accepted under this contract. Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. Payments for Line Item 1 will be made upon delivery of two major milestones: (1) Payment of 40% of total bid for Line Item 1 will be made upon installation of the Automated Laboratory Accreditation and Monitoring System and (2) Payment will be made for the remaining 60% of Line Item 1 upon acceptance of the system by WVDEP that it is working the way that it should and fulfilling all of the requirements of the specifications. All other Line Items will be paid monthly in arrears.

8. **TRAVEL:** Vendor shall be responsible for all mileage and travel costs, including travel time, associated with performance of this Contract. Any anticipated mileage or travel costs may be included in the flat fee or hourly rate listed on Vendor's bid, but such costs will not be paid by the Agency separately.

9. **FACILITIES ACCESS:** Performance of Contract Services may require access cards and/or keys to gain entrance to Agency's facilities. In the event that access cards and/or keys are required:

9.1. Vendor must identify principal service personnel which will be issued access cards and/or keys to perform service.

9.2. Vendor will be responsible for controlling cards and keys and will pay replacement fee, if the cards or keys become lost or stolen.

9.3. Vendor shall notify Agency immediately of any lost, stolen, or missing card or key.

9.4. Anyone performing under this Contract will be subject to Agency's security protocol and procedures.

9.5. Vendor shall inform all staff of Agency's security protocol and procedures.

10. VENDOR DEFAULT:

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

10.1.1. Failure to perform Contract Services in accordance with the requirements contained herein.

10.1.2. Failure to comply with other specifications and requirements contained herein.

10.1.3. Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

10.1.4. Failure to remedy deficient performance upon request.

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

10.2.1. Immediate cancellation of the Contract.

10.2.2. Immediate cancellation of one or more release orders issued under this Contract.

10.2.3. Any other remedies available in law or equity.

11. MISCELLANEOUS:

11.1. Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: _____
Telephone Number: _____
Fax Number: _____
Email Address: _____

Attachment A

TNI PT for Accreditation
Fields of Proficiency Testing
Whole Effluent Toxicity Testing - Non-Potable Water
Effective July 31, 2016

Blue = New Analyte Magenta = Changes

Matrix	EPA [1] Test Code	EPA Method Reference	EPA [1] Analyte Code	Technology [2,6,7] (Organism, Test Type [duration, type, condition, temperature and dilution water])	Analyte [3] (Endpoint)	Reference Toxicants and Concentration [4,5] Potassium chloride	Zinc sulfate heptahydrate	Ammonium phosphate dibasic
						(mg/L)	(mg/L)	(mg/L)
NPW	0013	2000.0	754	Fathead minnow (Pimephales promelas), 48-hr Acute, nonrenewal, 25°C, MHSF	LC50	2000	-	400
NPW	0014	2000.0	755	Fathead minnow (Pimephales promelas), 48-hr Acute, nonrenewal, 25°C, 20% DMW	LC50	2000	8.8	300
NPW	0015	1000.0	756	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, MHSF	NOEC Survival	2000	2.2	150
NPW	0015	1000.0	808	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, MHSF	IC25 (ON) Growth	2000	2.2	150
NPW	0015	1000.0	810	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, MHSF	NOEC (ON) Growth	2000	2.2	150
NPW	0016	1000.0	759	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, 20% DMW	NOEC Survival	2000	4.4	150
NPW	0016	1000.0	812	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, 20% DMW	IC25 (ON) Growth	2000	4.4	150
NPW	0016	1000.0	814	Fathead minnow (Pimephales promelas), 7-day Chronic, daily renewal, 20% DMW	NOEC (ON) Growth	2000	4.4	150
NPW	0019	2002.0	764	Ceriodaphnia dubia, 48-hr Acute, nonrenewal, 25°C, MHSF	LC50	1000	2.2	200
NPW	0020	2002.0	765	Ceriodaphnia dubia, 48-hr Acute, nonrenewal, 25°C, 20% DMW	LC50	1000	2.2	200
NPW	0021	1002.0	766	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, MHSF	NOEC Survival	1000	1.5	200
NPW	0021	1002.0	767	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, MHSF	IC25 Reproduction	1000	1.5	200
NPW	0021	1002.0	768	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, MHSF	NOEC Reproduction	1000	1.5	200
NPW	0022	1002.0	769	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, 20% DMW	NOEC Survival	1000	1.5	200
NPW	0022	1002.0	770	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, 20% DMW	IC25 Reproduction	1000	1.5	200
NPW	0022	1002.0	771	Ceriodaphnia dubia, 3-Brood Chronic, daily renewal, 20% DMW	NOEC Reproduction	1000	1.5	200
NPW	0032	2021.0	788	Daphnia magna, 48-hr Acute, nonrenewal, 25°C, MHSF	LC50	1000	8.8	400
NPW	0038	2021.0	794	Daphnia pulex, 48-hr Acute, nonrenewal, 25°C, MHSF	LC50	1000	8.8	400
NPW	0042	2007.0	798	Mysid (Mysidopsis bahia, Americamysis bahia), 48-hr Acute, nonrenewal, 25°C, SSW	LC50	1200	17.6	-
NPW	0043	1007.0	799	Mysid (Mysidopsis bahia, Americamysis bahia), 7-day Chronic, daily renewal, SSW	NOEC Survival	1200	2.6	-
NPW	0043	1007.0	816	Mysid (Mysidopsis bahia, Americamysis bahia), 7-day Chronic, daily renewal, SSW	IC25 (ON) Growth	1200	2.6	-
NPW	0043	1007.0	818	Mysid (Mysidopsis bahia, Americamysis bahia), 7-day Chronic, daily renewal, SSW	NOEC (ON) Growth	1200	2.6	-
NPW	0044	2006.0	803	Inland silverside (Menidia beryllina), 48-hr Acute, nonrenewal, 25°C, SSW	LC50	1000	35.3	-
NPW	0045	1006.0	824	Inland silverside (Menidia beryllina), 7-day Chronic, daily renewal, SSW	NOEC Survival	1000	-	-
NPW	0045	1006.0	825	Inland silverside (Menidia beryllina), 7-day Chronic, daily renewal, SSW	IC25 (ON) Growth	1000	-	-
NPW	0045	1006.0	826	Inland silverside (Menidia beryllina), 7-day Chronic, daily renewal, SSW	NOEC (ON) Growth	1000	-	-
NPW	0046	2004.0	804	Sheepshead minnow (Cyprinodon variegatus), 48-hr Acute, nonrenewal, 25°C, SSW	LC50	6000	-	-

TNI PT for Accreditation
Fields of Proficiency Testing
Whole Effluent Toxicity Testing - Non-Potable Water
Effective July 31, 2016

Blue = New Analyte Magenta = Changes

NPW	0047	1004.0	805	Sheepshead minnow (Cyprinodon variegatus), 7-day Chronic, daily renewal, SSW	NOEC Survival	3000	6.6	-
NPW	0047	1004.0	820	Sheepshead minnow (Cyprinodon variegatus), 7-day Chronic, daily renewal, SSW	IC25 (ON) Growth	3000	6.6	-
NPW	0047	1004.0	822	Sheepshead minnow (Cyprinodon variegatus), 7-day Chronic, daily renewal, SSW	NOEC (ON) Growth	3000	6.6	-

1) EPA Test Code and Analyte Code are Technology and Analyte specific.

2) Dilution Water definition:
MHSF = Moderately Hard Synthetic Freshwater
20% DMW - 20% Diluted Mineral Water
SSW - Synthetic seawater

3) Analyte definitions:
LC50 = Concentration where 50% of the organisms do not survive.
NOEC = No Observable Effects Concentration
IC25 = Concentration where there is 25% reduction in growth or reproduction.
ON = Calculation based on Original Number of organisms used to start the test.

4) Reference Toxicant Concentrations are shown as guidance.

5) Reference Toxicant Concentrations shown above are as the toxicant salt or compound.

6) Proficiency Study Assigned Values (AV):
NOEC Analytes: AV should be set to the Study Median of the data reported by laboratories; reported values are <6.25%, 6.25%, 12.5%, 25%, 50%, 100%, or >100%. If the Median falls between two of these values, then the AV is set at the higher value.
Non-NOEC Analytes: AV should be set to the Study Mean, calculated using reported values from 6.25% and 100%, inclusive.
Robust Study Mean and Standard Deviation are generated using appropriate statistical analysis of study data set. (ie Bi-weight, Grubbs, Dixon, ISO 13528, etc.)

7) Proficiency Testing Acceptance Limits:
NOEC Analytes: Lower Acceptance Limit is the test dilution below the Median (or <6.25%, whichever is higher); Upper Acceptance Limit is the test dilution above the Median (or >100%, whichever is lower). If the Median is between two test dilutions, then the Lower Acceptance Limit is the second test dilution below the Median, and the Upper Acceptance Limit is the second test dilution above the Median.
Non-NOEC Analytes: Mean +/- 2 Standard Deviations. If the upper limit is greater than 100%, then set the Upper Acceptance Limit at ">100%." If the lower limit is less than 6.25%, then set the Lower Acceptance Limit to "<6.25%."

TNI PT for Accreditation
Fields of Proficiency Testing with PTRLs
Non-Potable Water (NPW)
Effective: October 1, 2021

Blue = New Analyte Magenta = Changes

Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]
				Microbiology	CFU/100 mL					CFU/100 mL
NPW	0233	2500	NA	Total Coliform, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW	0235	2530	NA	Fecal Coliform, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW		2525	NA	E.coli, MF [8]	20 to 2400	Log transform; ±3 SD				2
NPW		2520	NA	Enterococci, MF [8]	20 to 1000	Log transform; ±3 SD				2
					MPN/100 mL					MPN/100 mL
NPW	0234	2500	NA	Total Coliform (MPN-Multiple Tube) [9]	20 to 2400	Log transform; ±3 SD				2
NPW	0234	2500	NA	Total Coliform (MPN-Multiple Well) [9]	20 to 2400	Log transform; ±3 SD				2
NPW	0236	2530	NA	Fecal Coliform (MPN-Multiple Tube) [9]	20 to 2400	Log transform; ±3 SD				2
NPW	0236	2530	NA	Fecal Coliform (MPN-Multiple Well) [9]	20 to 2400	Log transform; ±3 SD				2
NPW		2525	NA	E.coli (MPN-Multiple Tube) [9]	20 to 2400	Log transform; ±3 SD				2
NPW		2525	NA	E.coli (MPN-Multiple Well) [9]	20 to 2400	Log transform; ±3 SD				2
NPW		2520	NA	Enterococci (MPN-Multiple Tube) [9]	20 to 1000	Log transform; ±3 SD				2
NPW		2520	NA	Enterococci (MPN-Multiple Well) [9]	20 to 1000	Log transform; ±3 SD				2
				Trace Metals	µg/L					µg/L
NPW	0001	1000	7429-90-5	Aluminum	200 to 4000	0.9823	9.5889	0.0471	11.2110	144
NPW	0016	1005	7440-36-0	Antimony	90 to 900	0.9864	-1.1174	0.0471	6.1230	57
NPW	0002	1010	7440-38-2	Arsenic	90 to 900	0.9916	1.2647	0.0422	5.1741	64
NPW	0237	1015	7440-39-3	Barium	100 to 2500	±15% fixed acceptance limit				85
NPW	0003	1020	7440-41-7	Beryllium	50 to 500	±15% fixed acceptance limit				42
NPW		1025	7440-42-8	Boron	800 to 2000	±15% fixed acceptance limit				680
NPW	0004	1030	7440-43-9	Cadmium	100 to 1000	±15% fixed acceptance limit				85
NPW	0006	1040	7440-47-3	Chromium	100 to 1000	±15% fixed acceptance limit				85
NPW	0238	1045	18540-29-9	Chromium (VI)	90 to 900	0.9917	1.0232	0.0476	2.2011	71
NPW	0005	1050	7440-48-4	Cobalt	100 to 1000	±15% fixed acceptance limit				85
NPW	0007	1055	7440-50-8	Copper	100 to 1000	±15% fixed acceptance limit				85
NPW	0008	1070	7439-89-6	Iron	200 to 4000	±15% fixed acceptance limit				170
NPW	0012	1075	7439-92-1	Lead	100 to 1500	±15% fixed acceptance limit				85
NPW	0010	1090	7439-96-5	Manganese	200 to 2000	±15% fixed acceptance limit				170
NPW	0009	1095	7439-97-6	Mercury [10a]	3.0 to 30	±30% fixed acceptance limit				0.9
NPW	0074	1100	7439-98-7	Molybdenum	60 to 600	0.9953	-0.1614	0.0372	2.5555	45
NPW	0011	1105	7440-02-0	Nickel	200 to 2000	1.0012	1.5795	0.0368	3.8151	168
NPW	0013	1140	7782-49-2	Selenium	100 to 1000	±15% fixed acceptance limit				85
NPW	0017	1150	7440-22-4	Silver	100 to 1000	±15% fixed acceptance limit				85
NPW	0075	1160	7440-24-6	Strontium	50 to 500	±15% fixed acceptance limit				42
NPW	0018	1165	7440-28-0	Thallium	80 to 800	0.9932	-0.9634	0.0479	4.2361	54
NPW	0239	1175	7440-31-5	Tin	200 to 2000	±30% fixed acceptance limit				140
NPW	0076	1180	7440-32-6	Titanium	60 to 300	±15% fixed acceptance limit				51
NPW	0014	1185	7440-62-2	Vanadium	50 to 2000	±15% fixed acceptance limit				42
NPW	0015	1190	7440-66-6	Zinc	300 to 2000	±15% fixed acceptance limit				255

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				Demands [10b]	mg/L					mg/L
NPW	0038	1530	NA	Biochemical oxygen demand [10c]	18 to 230	0.6237	0.7022	0.0928	0.6636	4.9
NPW	0102	1555	NA	Carbonaceous BOD (CBOD) [10c]	18 to 230	0.5648	0.6665	0.0965	0.8253	3.1
NPW	0036	1565	NA	Chemical Oxygen Demand (COD) [10d]	30 to 250	0.9843	-0.3171	0.0432	3.0191	16
NPW	0037	2040	NA	Total Organic Carbon (TOC) [10e]	6.0 to 100	0.9926	0.1680	0.0473	0.3536	4.2
				Minerals	mg/L					mg/L
NPW	0027	1505	NA	Alkalinity as $CaCO_3$	25 to 400	±20% at < 40; ±15% at ≥ 40 fixed acceptance limit				20
NPW		1540	24959-67-9	Bromide	1.0 to 10	1.0098	-0.0533	0.0400	0.0912	0.56
NPW	0023	1035	7440-70-2	Calcium	10 to 100	±15% fixed acceptance limit				8.5
NPW	0028	1575	16887-00-6	Chloride	35 to 275	1.0005	0.0490	0.0376	0.3716	30
NPW	0029	1730	16984-48-8	Fluoride	0.4 to 4	0.9748	0.0156	0.0487	0.0277	0.26
NPW		1550	NA	Calcium hardness as CaCO3	25 to 250	±15% fixed acceptance limit				21
NPW	0022	1755	NA	Total hardness as CaCO3	40 to 415	±15% fixed acceptance limit				34
NPW	0024	1085	7439-95-4	Magnesium	4.0 to 40	±15% fixed acceptance limit				3.4
NPW	0026	1125	7440-09-7	Potassium	4.0 to 40	±20% fixed acceptance limit				3.2
NPW	0025	1155	7440-23-5	Sodium	10 to 100	±20% fixed acceptance limit				8.0
NPW	0020	1610	NA	Conductivity	200 to 1200 µmhos/cm	±10% fixed acceptance limit				180 µmhos/cm
NPW	0030	2000	14808-79-8	Sulfate	5.0 to 125	0.9880	-0.2130	0.0473	0.3309	3.0
NPW		2005	18496-25-8	Sulfide	2.0 to 10	0.9657	-0.1271	0.1205	0.2816	0.20
NPW	0021	1955	NA	Residue-filterable (TDS)	140 to 800	1.0000	0.0000	0.0000	15.0000	95
NPW	0105	1950	NA	Residue-total (TS)	140 to 800	1.0000	0.0000	0.0000	15.0000	95
				Nutrients	mg/L					mg/L
NPW	0031	1515	NA	Ammonia as N	1.0 to 20	0.9923	0.0567	0.0583	0.0914	0.60
NPW	0032	1810	NA	Nitrate as N	2.0 to 25	0.9975	-0.0005	0.0506	0.0642	1.50
NPW		1820	NA	Nitrate plus Nitrite as N	2.5 to 25	0.9957	-0.0010	0.0509	0.0400	1.99
NPW		1840	NA	Nitrite as N	0.4 to 4.0	1.0017	-0.0030	0.0377	0.0250	0.28
NPW	0033	1870	264888-19-9	Orthophosphate as P	0.5 to 5.5	±15% fixed acceptance limit				0.42
NPW	0034	1795	NA	Total Kjeldahl-Nitrogen [10f]	3.0 to 35	0.9701	0.2283	0.0680	0.1906	1.95
NPW	0035	1910	NA	Total Phosphorus	0.5 to 10	0.9932	0.0084	0.0506	0.0254	0.35

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				Misc. Analytes	mg/L					mg/L
NPW		1500	NA	Acidity, as CaCO3	650 to 1800	±10% fixed acceptance limit				585
NPW		1605	NA	Color	10 to 75 PC units	0.9474	0.6098	0.0367	2.4407	1.7 PC units
NPW	0072	1960	NA	Residue-nonfilterable (TSS)	20 to 100	0.9728	-0.6338	0.0300	1.5793	12
NPW	0019	1900	NA	pH [10g]	5.0 to 10 units	± 0.2 units fixed acceptance limit				Not applicable
NPW	0071	1645	NA	Total Cyanide [10h]	0.1 to 1	±35% fixed acceptance limit				0.065
NPW	0097	1905	NA	Total Phenolics [10i]	0.5 to 5	0.6408	0.0250	0.1038	0.0082	0.16
NPW	0098	1940	NA	Total Residual Chlorine	0.5 to 3.0	0.9345	0.0392	0.0688	0.0073	0.38
NPW		1965	NA	Residue-settleable	5.0 to 50 mL/L	1.0436	-0.0108	0.0597	0.4546	2.9 mL/L
NPW		1990	NA	Silica as SiO2	50 to 250	±25% fixed acceptance limit				38
NPW		2025	NA	Surfactants - MBAS	0.2 to 1.0	1.0421	-0.0068	0.1326	0.0046	0.10
NPW		2055	NA	Turbidity [10j]	2.0 to 30 NTU	1.0040	-0.0368	0.0475	0.1575	1.2 NTU
NPW		1970	NA	Residue-volatile	100 to 500	0.9644	-4.7559	0.0182	14.9450	41
				Low Level Analytes [11]						
NPW		1095	7439-97-6	Mercury [10a]	20 to 100 ng/L	0.9910	0.2064	0.0432	2.5774	9.7
NPW		1940	NA	Total Residual Chlorine	50 to 250 µg/L	1.0000	0.0000	0.0000	20.0000	5.0

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				Volatile Aromatics [1]	µg/L					µg/L
NPW	0065	4375	71-43-2	Benzene	10 to 120	±30% fixed acceptance limit				7.0
NPW	0094	4610	95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	10 to 120	±30% fixed acceptance limit				7.0
NPW	0096	4615	541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)	10 to 120	±30% fixed acceptance limit				7.0
NPW	0095	4620	106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	10 to 120	±30% fixed acceptance limit				7.0
NPW	0066	4765	100-41-4	Ethylbenzene	10 to 120	±30% fixed acceptance limit				7.0
NPW	0222	5005	91-20-3	Naphthalene	15 to 150	0.8785	1.4343	0.1335	0.7561	6.3
NPW		5100	100-42-5	Styrene	20 to 120	±35% fixed acceptance limit				13.0
NPW	0067	5140	108-88-3	Toluene	10 to 120	±30% fixed acceptance limit				7.0
NPW	0092	5155	120-82-1	1,2,4-Trichlorobenzene	15 to 150	0.9160	-1.3028	0.1473	0.5100	4.3
NPW		5210	95-63-6	1,2,4-Trimethylbenzene	10 to 120	±35% fixed acceptance limit				6.5
NPW		5215	108-67-8	1,3,5-Trimethylbenzene	10 to 120	±35% fixed acceptance limit				6.5
NPW		5240	NA	m+p-xylene	10 to 150	±40% fixed acceptance limit				6.0
NPW		5250	95-47-6	o-Xylene	10 to 150	±40% fixed acceptance limit				6.0
NPW	0242	5260	1330-20-7	Xylene (total) [12]	20 to 300	±40% fixed acceptance limit				12
				Volatile Ketones/Ethers [1]	µg/L					µg/L
NPW		4315	67-64-1	Acetone	20 to 200	0.8856	3.5838	0.2028	1.7474	3.9
NPW		4860	591-78-6	2-Hexanone	20 to 200	1.0054	-1.1748	0.1534	1.7764	4.4
NPW		4995	108-10-1	4-Methyl-2-pentanone (MIBK)	20 to 200	1.0022	-1.0337	0.0934	4.1819	2.0
NPW		5000	1634-04-4	Methyl tert-butyl ether (MTBE)	15 to 150	1.0233	-0.3620	0.1112	0.3083	9.0

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				Volatile Halocarbons [1]	µg/L					µg/L
NPW	0060	4395	75-27-4	Bromodichloromethane	10 to 100	±40% fixed acceptance limit				6.0
NPW	0062	4400	75-25-2	Bromoform	10 to 100	±40% fixed acceptance limit				6.0
NPW	0243	4950	74-83-9	Methyl bromide (Bromomethane)	20 to 120	± 60% fixed acceptance limit				8.0
NPW	0058	4455	56-23-5	Carbon tetrachloride	15 to 150	0.9577	0.0612	0.1269	0.3443	7.7
NPW	0064	4475	108-90-7	Chlorobenzene	10 to 120	±30% fixed acceptance limit				7.0
NPW	0244	4485	75-00-3	Chloroethane (Ethyl chloride)	20 to 120	± 60% fixed acceptance limit				8.0
NPW	0055	4505	67-66-3	Chloroform	10 to 100	±30% fixed acceptance limit				7.0
NPW	0245	4960	74-87-3	Methyl chloride (Chloromethane)	20 to 120	± 60% fixed acceptance limit				8.0
NPW	0061	4575	124-48-1	Chlorodibromomethane	10 to 100	±40% fixed acceptance limit				6.0
NPW		4570	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	15 to 150	±40% fixed acceptance limit				9.0
NPW		4585	106-93-4	1,2-Dibromoethane (EDB, Ethylene dibromide)	10 to 120	±35% fixed acceptance limit				6.5
NPW		4595	74-95-3	Dibromomethane (Methylene bromide)	10 to 120	±35% fixed acceptance limit				6.5
NPW		4630	75-34-3	1,1-Dichloroethane	10 to 150	0.9977	0.2117	0.1227	0.0174	6.4
NPW	0054	4635	107-06-2	1,2-Dichloroethane (Ethylene dichloride)	15 to 150	0.9843	1.3728	0.0912	0.4693	10.6
NPW	0246	4640	75-35-4	1,1-Dichloroethylene	10 to 150	1.0034	0.6630	0.1447	0.0521	6.2
NPW		4645	156-59-2	cis-1,2-Dichloroethylene	10 to 150	0.9973	0.3699	0.1095	0.0036	7.0
NPW	0247	4700	156-60-5	trans-1,2-Dichloroethylene	10 to 120	±40% fixed acceptance limit				6.0
NPW	0248	4655	78-87-5	1,2-Dichloropropane	10 to 150	±30% fixed acceptance limit				7.0
NPW		4680	10061-01-5	cis-1,3-Dichloropropene	10 to 120	±35% fixed acceptance limit				6.5
NPW	0249	4685	10061-02-6	trans-1,3-Dichloropropylene	10 to 120	±35% fixed acceptance limit				6.5
NPW	0063	4975	75-09-2	Methylene chloride (Dichloromethane)	10 to 120	±40% fixed acceptance limit				6.0
NPW		5105	630-20-6	1,1,1,2-Tetrachloroethane	15 to 150	±35% fixed acceptance limit				9.8
NPW	0250	5110	79-34-5	1,1,2,2-Tetrachloroethane	15 to 150	±35% fixed acceptance limit				9.8
NPW	0059	5115	127-18-4	Tetrachloroethylene (Perchloroethylene)	10 to 150	0.9416	-0.5063	0.1189	0.3441	4.3
NPW	0056	5160	71-55-6	1,1,1-Trichloroethane	10 to 100	±40% fixed acceptance limit				6.0
NPW	0251	5165	79-00-5	1,1,2-Trichloroethane	15 to 150	±30% fixed acceptance limit				10.5
NPW	0057	5170	79-01-6	Trichloroethene (Trichloroethylene)	10 to 100	0.9611	0.5720	0.1077	0.2478	6.2
NPW	0252	5175	75-69-4	Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	20 to 120	± 60% fixed acceptance limit				8.0
NPW		5180	96-18-4	1,2,3-Trichloropropane	15 to 150	0.9867	-0.4721	0.1630	0.9605	4.1
NPW	0253	5235	75-01-4	Vinyl chloride (Chloroethene)	20 to 120	± 60% fixed acceptance limit				8.0
				Low-Level Halocarbons [11]	µg/L					µg/L
NPW		4570	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	0.2 to 2.0	0.9542	0.0359	0.1200	0.0161	0.11
NPW		4585	106-93-4	1,2-Dibromoethane (EDB, Ethylene dibromide)	0.2 to 2.0	0.9341	0.0293	0.1090	0.0239	0.08
NPW		5180	96-18-4	1,2,3-Trichloropropane	0.2 to 2.0	0.9284	0.0534	0.1257	0.0117	0.13

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				Volatile Petroleum Hydrocarbons	µg/L					µg/L
NPW		9408	8006-61-9	Gasoline Range Organics (GRO) [13]	400 to 4000	1.0683	-7.7234	0.2162	35.0439	55
				Base/Neutrals [1]	µg/L					µg/L
NPW	0189	5500	83-32-9	Acenaphthene	10 to 200	0.7748	0.8506	0.1427	0.1159	4.0
NPW	0190	5505	208-96-8	Acenaphthylene	10 to 200	0.8029	-0.2974	0.1485	0.1111	2.9
NPW	0192	5555	120-12-7	Anthracene	10 to 200	0.7986	1.7870	0.1229	0.7303	3.9
NPW	0177	5575	56-55-3	Benzo(a)anthracene	10 to 200	0.8381	0.5699	0.1162	0.6075	3.6
NPW	0254	5670	85-68-7	Butyl benzyl phthalate	50 to 200	0.8496	-2.1863	0.1776	0.0752	13.4
NPW	0178	5585	205-99-2	Benzo(b)fluoranthene	20 to 200	0.8327	0.1531	0.1497	0.1078	7.5
NPW	0179	5600	207-08-9	Benzo(k)fluoranthene	20 to 200	0.8223	1.996	0.1862	1.126	7.7
NPW	0180	5590	191-24-2	Benzo(g,h,i)perylene	10 to 200	0.8261	1.5562	0.1556	0.0166	5.1
NPW	0255	5580	50-32-8	Benzo(a)pyrene	10 to 200	0.8207	-0.0550	0.1484	0.4349	2.4
NPW	0198	5660	101-55-3	4-Bromophenyl phenyl ether (BDE-3)	20 to 200	0.8081	3.0645	0.1325	0.8996	8.6
NPW	0195	5760	111-91-1	bis(2-Chloroethoxy)methane	20 to 200	0.7615	0.4890	0.1193	1.5633	3.9
NPW	0196	5765	111-44-4	bis(2-Chloroethyl)ether	20 to 200	0.7090	2.3607	0.1529	0.4801	5.9
NPW	0197	4659	108-60-1	2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methyethyl)ether [18]	30 to 200	0.7285	1.6917	0.1303	2.9025	3.1
NPW	0256	6065	117-81-7	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	20 to 200	0.8065	2.5761	0.1474	1.6124	5.0
NPW	0204	5825	7005-72-3	4-Chlorophenyl phenylether	20 to 200	0.7669	3.7466	0.1417	0.2303	9.9
NPW	0203	5795	91-58-7	2-Chloronaphthalene	20 to 200	0.7102	2.4854	0.1477	0.5079	6.3
NPW	0181	5855	218-01-9	Chrysene	10 to 200	0.8180	2.3274	0.1351	0.2137	5.8
NPW	0182	5895	53-70-3	Dibenzo(a,h)anthracene	20 to 200	0.8079	2.3890	0.1497	0.8729	6.9
NPW		5905	132-64-9	Dibenzofuran	30 to 200	0.7411	2.7181	0.1159	1.0735	11.3
NPW		4610	95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	20 to 200	0.6365	0.7906	0.1517	2.2155	2.0
NPW		4615	541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)	20 to 200	0.5921	3.0260	0.1787	0.3464	3.1
NPW		4620	106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	20 to 200	0.5671	3.6005	0.1640	0.4826	3.7
NPW	0208	6070	84-66-2	Diethyl phthalate	50 to 200	0.7492	3.3637	0.1805	2.0213	8.9
NPW	0209	6135	131-11-3	Dimethyl phthalate	50 to 200	0.6375	3.9631	0.2524	0.8174	11.5
NPW	0205	5925	84-74-2	Di-n-butyl phthalate	40 to 200	0.7797	5.1233	0.1490	0.8776	15.8
NPW	0186	6185	121-14-2	2,4-Dinitrotoluene (2,4-DNT)	20 to 200	0.8219	0.4137	0.1183	1.7449	4.5
NPW	0210	6190	606-20-2	2,6-Dinitrotoluene (2,6-DNT)	20 to 200	0.7999	0.4770	0.1316	0.1368	8.2
NPW	0211	6200	117-84-0	Di-n-octyl phthalate	30 to 200	0.8186	2.8779	0.1724	1.2382	8.2
NPW	0212	6265	206-44-0	Fluoranthene	30 to 200	0.8087	2.9863	0.1272	0.0642	15.6
NPW	0213	6270	86-73-7	Fluorene	10 to 200	0.7619	3.7583	0.1165	1.0349	4.8
NPW	0214	6275	118-74-1	Hexachlorobenzene	20 to 200	0.8202	0.2263	0.1238	0.1297	8.8
NPW	0215	4835	87-68-3	Hexachlorobutadiene	50 to 200	0.6286	2.6591	0.1616	1.9082	4.3
NPW	0216	6285	77-47-4	Hexachlorocyclopentadiene	50 to 200	0.6216	-4.4226	0.2049	4.3222	5.0
NPW	0217	4840	67-72-1	Hexachloroethane	50 to 200	0.5921	-0.0657	0.1640	0.5308	3.3
NPW	0218	6315	193-39-5	Indeno(1,2,3, cd)pyrene	30 to 200	0.7115	5.0289	0.1430	1.4299	9.2
NPW	0219	6320	78-59-1	Isophorone	20 to 200	0.7981	0.7053	0.1437	0.3000	7.1
NPW		6385	91-57-6	2-Methylnaphthalene	20 to 200	0.6983	2.0844	0.1361	2.1436	2.0

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]
				Base/Neutrals [1] cont'	µg/L					µg/L
NPW	0222	5005	91-20-3	Naphthalene	20 to 200	0.6749	3.5514	0.1441	1.2975	4.5
NPW	0226	5015	98-95-3	Nitrobenzene	20 to 200	0.7463	0.9864	0.1388	0.4589	6.2
NPW	0227	6530	62-75-9	N-Nitrosodimethylamine	75 to 200	0.4665	7.3433	0.1652	3.9997	7.5
NPW	0230	6545	621-64-7	n-Nitrosodi-n-propylamine	30 to 200	0.7913	-0.0510	0.1541	0.1328	9.4
NPW	0229	6535	86-30-6	N-Nitrosodiphenylamine	30 to 200	0.7740	0.6711	0.2016	0.0494	5.6
NPW	0231	6615	85-01-8	Phenanthrene	10 to 200	0.8001	2.8698	0.1110	0.9485	4.7
NPW	0187	6665	129-00-0	Pyrene	10 to 200	0.8476	1.0097	0.1490	0.0530	4.9
NPW	0092	5155	120-82-1	1,2,4-Trichlorobenzene	20 to 200	0.6769	1.1166	0.1493	1.8128	2.0
				Acids [1]	µg/L					µg/L
NPW	0161	5700	59-50-7	4-Chloro-3-methylphenol	30 to 200	0.7998	0.6264	0.1421	0.0397	11.7
NPW	0162	5800	95-57-8	2-Chlorophenol	30 to 200	0.7292	1.4640	0.1518	0.0174	9.6
NPW	0163	6000	120-83-2	2,4-Dichlorophenol	30 to 200	0.7362	2.8458	0.1433	0.0585	11.9
NPW		6005	87-65-0	2,6-Dichlorophenol	30 to 200	0.7512	3.7563	0.1564	0.0312	12.1
NPW	0165	6130	105-67-9	2,4-Dimethylphenol	40 to 200	0.7496	1.4509	0.1601	0.0953	11.9
NPW	0167	6175	51-28-5	2,4-Dinitrophenol	100 to 200	0.6531	3.5920	0.1695	8.5727	10
NPW	0168	6360	534-52-1	2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	40 to 200	0.8108	3.6290	0.1573	2.1683	10.7
NPW		6400	95-48-7	2-Methylphenol (o-Cresol)	40 to 200	0.6821	2.2126	0.1529	0.5485	9.5
NPW		6410	106-44-5	4-Methylphenol (p-Cresol) [14]	50 to 200	0.6531	2.1854	0.2008	0.7807	5.0
NPW	0171	6490	88-75-5	2-Nitrophenol	50 to 200	0.7631	1.1486	0.1272	2.4547	12.9
NPW	0173	6500	100-02-7	4-Nitrophenol	100 to 200	0.5591	-1.0075	0.2511	1.9409	10
NPW	0174	6625	108-95-2	Phenol	100 to 200	0.557	0.5929	0.253	1.0269	10
NPW	0158	6605	87-86-5	Pentachlorophenol	40 to 200	0.8469	-0.7338	0.1561	1.5178	9.9
NPW	0175	6835	95-95-4	2,4,5-Trichlorophenol	30 to 200	0.7726	3.2199	0.1362	0.9916	11.2
NPW	0159	6840	88-06-2	2,4,6-Trichlorophenol	30 to 200	0.7880	0.8051	0.1406	0.0280	11.7

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Blue = New Analyte Magenta = Changes

Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]
				PCBs in Water [3, 20]	µg/L					µg/L
NPW	0040	8880	12674-11-2	Aroclor-1016 (PCB-1016)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0041	8885	11104-28-2	Aroclor-1221 (PCB-1221)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0042	8890	11141-16-5	Aroclor-1232 (PCB-1232)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0040	8895	53469-21-9	Aroclor-1242 (PCB-1242)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0044	8900	12672-29-6	Aroclor-1248 (PCB-1248)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0045	8905	11097-69-1	Aroclor-1254 (PCB-1254)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
NPW	0046	8910	11096-82-5	Aroclor-1260 (PCB-1260)	2.0 to 10	0.8318	0.1991	0.1591	0.0384	0.8
				Organochlorine Pesticides [1, 19]	µg/L					µg/L
NPW	0047	7025	309-00-2	Aldrin	1.0 to 15	0.8524	-0.0159	0.1655	0.0002	0.34
NPW	0079	7110	319-84-6	alpha-BHC (alpha-Hexachlorocyclohexane)	2.0 to 20	0.8996	0.0151	0.1505	0.0349	0.81
NPW	0080	7115	319-85-7	beta-BHC (beta-Hexachlorocyclohexane)	2.0 to 20	0.8889	0.1961	0.1372	0.0777	0.92
NPW	0081	7105	319-86-8	delta-BHC	2.0 to 20	0.9031	0.1036	0.1525	0.0673	0.79
NPW	0082	7120	58-89-9	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	2.0 to 20	0.8959	0.1095	0.1528	0.0189	0.93
NPW		7240	5103-71-9	cis-Chlordane (alpha-Chlordane)	1.0 to 10	0.8842	0.0542	0.1423	0.0348	0.41
NPW		7245	5566-34-7	gamma-Chlordane	1.0 to 10	0.8617	0.1041	0.1323	0.0716	0.35
NPW	0053	7250	12789-03-6	Chlordane (tech.)	3.0 to 25	0.8501	0.4121	0.1540	0.0381	1.46
NPW	0049	7355	72-54-8	4,4'-DDD[19a]	2.0 to 10	0.9271	0.03839	0.1227	0.1763	0.63
NPW	0050	7360	72-55-9	4,4'-DDE[19a]	1.0 to 10	0.8793	0.0718	0.1468	0.0395	0.39
NPW	0051	7365	50-29-3	4,4'-DDT[19a]	1.0 to 10	0.8987	0.1076	0.1680	0.0337	0.40
NPW	0048	7470	60-57-1	Dieldrin	1.0 to 15	0.9126	0.0323	0.1327	0.0240	0.47
NPW	0083	7510	959-98-8	Endosulfan I	4.0 to 20	0.8698	-0.0604	0.1548	0.0549	1.40
NPW	0084	7515	33213-65-9	Endosulfan II	4.0 to 20	0.8765	0.0994	0.1490	0.0912	1.54
NPW	0085	7520	1031-07-8	Endosulfan sulfate	4.0 to 20	0.8752	0.5312	0.1348	0.2091	1.79
NPW	0086	7540	72-20-8	Endrin[19b]	2.0 to 20	0.9183	0.0706	0.1594	0.0277	0.87
NPW	0087	7530	7421-93-4	Endrin aldehyde[19b]	4.0 to 20	0.8585	0.4845	0.1571	0.2054	1.42
NPW		7535	53494-70-5	Endrin ketone[19b]	4.0 to 20	0.8951	0.3702	0.1135	0.1902	2.0
NPW	0052	7685	76-44-8	Heptachlor	1.0 to 10	0.8470	0.0457	0.1596	0.0402	0.29
NPW	0078	7690	1024-57-3	Heptachlor epoxide	1.0 to 10	0.9176	0.0041	0.1342	0.0268	0.44
NPW	0234	7810	72-43-5	Methoxychlor	2.0 to 20	0.9115	0.2801	0.1467	0.2290	0.54
NPW	0241	8250	8001-35-2	Toxaphene (Chlorinated Camphene)	20 to 100	0.8087	1.8908	0.1991	0.5080	4.59

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]
				Herbicides [1]	µg/L					µg/L
NPW	0257	8545	94-75-7	2,4-D	2 to 10	0.7204	0.2995	0.2543	0.0297	0.20
NPW	0258	8595	1918-00-9	Dicamba	2 to 10	0.7848	0.2788	0.1754	0.1455	0.40
NPW	0140	8655	93-76-5	2,4,5-T	2 to 10	0.8132	0.1393	0.1850	0.1353	0.20
NPW	0259	8650	93-72-1	Silvex (2,4,5-TP)	2 to 10	0.8349	0.1516	0.2046	0.0195	0.50
				Low Level PAHs [1]	µg/L					µg/L
NPW		5500	83-32-9	Acenaphthene	2.0 to 20	0.7600	0.1476	0.1456	0.0021	0.79
NPW		5505	208-96-8	Acenaphthylene	2.0 to 20	0.7856	0.0418	0.1133	0.0687	0.73
NPW		5555	120-12-7	Anthracene	0.5 to 5.0	0.8151	0.0194	0.1714	0.0115	0.14
NPW		5575	56-55-3	Benzo(a)anthracene	0.5 to 5.0	0.9012	-0.0236	0.0614	0.0462	0.20
NPW		5580	50-32-8	Benzo(a)pyrene	0.5 to 5.0	0.7745	0.0824	0.1162	0.0270	0.21
NPW		5585	205-99-2	Benzo(b)fluoranthene	0.5 to 5.0	0.8217	0.0544	0.1167	0.0144	0.25
NPW		5590	191-24-2	Benzo(g,h,i)perylene	0.5 to 5.0	0.7683	0.0737	0.1641	0.0088	0.18
NPW		5600	207-08-9	Benzo(k)fluoranthene	0.5 to 5.0	0.8943	-0.0069	0.1245	0.0108	0.22
NPW		5855	218-01-9	Chrysene	0.5 to 5.0	0.8883	0.0132	0.1046	0.0235	0.23
NPW		5895	53-70-3	Dibenz(a,h)anthracene	0.5 to 5.0	0.7914	0.0640	0.1377	0.0520	0.10
NPW		6265	206-44-0	Fluoranthene	0.5 to 5.0	0.8565	0.0211	0.1064	0.0128	0.25
NPW		6270	86-73-7	Fluorene	2.0 to 10	0.7863	0.0472	0.1153	0.0631	0.74
NPW		6315	193-39-5	Indeno(1,2,3-cd)pyrene	0.5 to 5.0	0.8224	0.0623	0.1316	0.0267	0.20
NPW		5005	91-20-3	Naphthalene	2.0 to 10	0.7279	0.0977	0.1251	0.0803	0.56
NPW		6615	85-01-8	Phenanthrene	0.5 to 5.0	0.8332	0.0256	0.1099	0.0118	0.24
NPW		6665	129-00-0	Pyrene	0.5 to 5.0	0.8468	0.0435	0.1023	0.0095	0.28
				Petroleum Hydrocarbons						
NPW		9369	68334-30-5	Diesel Range Organics (DRO) [15]	800 to 6000 µg/L	0.7790	-96.0467	0.1386	109.1897	80 µg/L
NPW	0104	1803	NA	n-Hexane Extractable Material (O&G) [10k,16]	20 to 200 mg/L	0.9400	-0.4116	0.0545	2.0789	8.8 mg/L
NPW		1853	NA	Non-Polar Extractable Material (TPH) [17]	20 to 200 mg/L	0.9692	-1.1573	0.1586	0.3709	7.6 mg/L

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]

1) For volatiles, base/neutrals, acids, organochlorine pesticides, herbicides, and low level PAHs, providers must include a minimum number of analytes using the criteria described below:
PT samples that are to be scored for one to ten analytes must include all of these analytes.
PT samples that are to be scored for ten to twenty analytes must include at least ten of these analytes or 80% ot the total, whichever number is greater.
PT samples that are to be scored for more than twenty analytes must include at least sixteen of these analytes or 60% ot the total, whichever number is greater.
If the calculated percentage of the total number of analytes in the PT sample is a fraction, the fraction shall be rounded up to the next whole number.

2) One sample (minimum) in every study, containing one Aroclor, selected at random from among the Aroclors listed above.

3) Acceptance limits are set at the Mean ± 3 SD
Where the a, b, c and d factors are presented, Mean = a*T + b; SD = c*T + d where T is the assigned value.
Where only the c and d factors are presented, Mean = Robust Study Mean; SD = c*X + d where X is the Robust Study Mean.
Where no factors are presented (Study Mean ±3SD), Mean = Robust Study Mean, SD = Robust Study Standard Deviation.
Robust Study Mean and Standard Deviation are generated using statistical analysis of study data set. (ie. Bi-weight, Grubbs, Dixon, etc.)
Quantitative Microbiology acceptance criteria are based on the robust participant Mean and SD determined from each respective PT study

4) If the lower acceptance limit generated using the criteria contained in this table is less than (<) 10% of the assigned value, the lower acceptance limits are set at 10% of the assigned value with the exception of microbiology analytes.

5) If the lower acceptance limit generated using the criteria contained in this table is greater than 90% of the assigned value, the lower acceptance limits are set at 90% of the assigned value with the exception of microbiology analytes.

6) If the upper acceptance limit generated using the criteria contained in this table is less than 110% of the assigned value, the upper acceptance limits are set at 110% of the assigned value with the exception of microbiology analytes.

7) TNI Proficiency Testing Reporting Limit (PTRL) is a statistically derived value that represents the lowest acceptable concentration for an analyte in a proficiency test sample, if the analyte is spiked into the proficiency test sample.

TNI PTRLs are also used by PT Providers to set the assigned value for unspiked analytes. For all analytes with an assigned value equal to <PTRL, the PT Provider must verify that the PT sample does not contain the analyte at a concentration greater than or equal to one-half (1/2) of the PTRL.

Refer to the "TNI V1M1 2016 Standard Update Guidance on Proficiency Testing Reporting Limit (PTRL)", GUID-3-114-Rev0, October 15, 2018 for further information.

8) These limits are for quantitative methods using membrane filtration techniques.

9) These limits are for quantitative methods using most probable number techniques.

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]

10) The following recommended sample designs, which were used in past USEPA studies, should be used as model designs because other designs may not give equivalent statistics. PT study providers may vary their sample designs from those shown. The specifics within each sample are within the discretion of the PT study Provider.

a) Design criterion for Mercury – 1:1 (mole:mole as Hg) Mercuric Oxide and Methyl Mercuric Chloride.

b) Design criteria for Demands – 1:1 Glucose and Glutamic Acid.

c) Design criteria for 5-Day BOD and Carbonaceous BOD – The assigned value used for BOD and CBOD is derived from the linear relationship between the BOD or CBOD value and the concentration of Glucose-Glutamic Acid (GGA) or Potassium Hydrogen Phthalate (KHP) used for the formulation. For example, 150 mg/L each of Glucose & of Glutamic Acid produces a BOD of 198 mg/L, and 300 mg/L KHP produces a BOD of 240 mg/L. 0 mg/L GGA or KHP would produce a BOD value of 0 mg/L.

d) Design criterion for Chemical Oxygen Demand – The assigned value of COD is (1.066 times mg Glucose plus 0.9787 times mg Glutamic Acid) divided by total liters of sample adjusted for required dilutions.

e) Design criterion for Total Organic Carbon – The assigned value of TOC is (0.4000 times mg Glucose plus 0.4082 times mg Glutamic Acid) divided by total liters of sample adjusted for required dilutions.

f) Design criterion for Total Kjeldahl Nitrogen – Glycine is the source of TKN.

g) Design criterion for pH – in separate solution (use buffer formulation from the CRC chemical handbook).

h) Design criterion for Total Cyanide – Potassium Ferricyanide.

i) Design criterion for Total Phenolics (4AAP) – 40% Phenol, 20% 2-Chlorophenol, 20% 2,4-Dinitrophenol, 20% 2,4-Dichlorophenol (mole %), calculated as mg/L Phenol.

j) Design criterion for Turbidity - Formazin is the source for Turbidity.

k) Design criterion for Oil and Grease – 1:1 Paraffin oil and cooking oil, vacuum pump oil, or similar mixture that does not contain volatile organics.

11) The Low Level Analytes' concentration ranges and acceptance criteria are specifically intended for technologies/methods that can achieve the listed PTRL.

12) Volatiles Aromatics must contain all three Xylene isomers. The concentration range of o-Xylene and m&p-Xylene is 10-150 µg/L each.

13) Gasoline Range Organics (GRO) per purge-and-trap extraction followed by chromatographic analysis. GRO is defined as the carbon range between n-C5 and n-C10.

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14) Laboratories seeking or maintaining TNI accreditation for Non-Potable Water 4-Methylphenol or the coeluting isomer pair of 3-Methylphenol and 4-Methylphenol must meet the TNI PT requirements for this Field of Proficiency Testing (4-Methylphenol).

15) Diesel Range Organics (DRO) per solvent extraction followed by chromatographic analysis. DRO is defined as the carbon range between n-C_{10} and n-C_{28}.

16) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).

17) non-Polar Extractable Material per solvent extraction and Silica Gel Treated (SGT) followed by gravimetric or infrared spectrometric analysis (Total Petroleum Hydrocarbons).

18) Also known as Bis(2-chloro-1-methylethyl) Ether, formerly known as Bis(2-chloroisopropyl) Ether.

19) These analytes are specified as part of a method defined and evaluated degradation process. PT sample designs for these analytes must conform to the following:
a) If the parent compound 4,4'-DDT is spiked into the PT sample, then its degradation products, 4,4'-DDD and 4,4'-DDE, must also be spiked into that PT sample.
b) If the parent compound Endrin is spiked into the PT sample, then its degradation products, Endrin aldehyde and Endrin ketone, must also be spiked into that PT sample.

20) A "Not Acceptable" evaluation of any one or more Aroclor Identifications constitutes a failure to demonstrate proficiency for all accredited Aroclors reported.

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Solid and Chemical Materials
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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range			Acceptance Criteria [3,4,5,6]				TNI PTRL [7]
								a	b	c	d	
				Trace Metals	mg/kg							mg/kg
SOLIDS		1000	7429-90-5	Aluminum	2500	to	25000	Study Mean		0.1307	293.1966	250
SOLIDS		1005	7440-36-0	Antimony	80	to	300	Study Mean		0.4385	8.1700	8.0
SOLIDS		1010	7440-38-2	Arsenic	40	to	400	Study Mean ± 30%				4.0
SOLIDS		1015	7440-39-3	Barium	100	to	1000	Study Mean ± 25%				10
SOLIDS		1020	7440-41-7	Beryllium	40	to	400	Study Mean ± 25%				4.0
SOLIDS		1025	7440-42-8	Boron	80	to	800	Study Mean ± 40%				48
SOLIDS		1030	7440-43-9	Cadmium	40	to	400	Study Mean ± 25%				4.0
SOLIDS		1035	7440-70-2	Calcium	1500	to	25000	Study Mean		0.0730	87.3802	150
SOLIDS		1040	7440-47-3	Chromium	40	to	400	Study Mean ± 30%				4.0
SOLIDS		1045	18540-29-9	Chromium (VI)	40	to	300	Study Mean		0.1547	8.5460	4.0
SOLIDS		1050	7440-48-4	Cobalt	40	to	400	Study Mean ± 25%				4.0
SOLIDS		1055	7440-50-8	Copper	40	to	400	Study Mean ± 25%				4.0
SOLIDS		1070	7439-89-6	Iron	5000	to	50000	Study Mean		0.1102	1500.6038	500
SOLIDS		1075	7439-92-1	Lead	40	to	400	Study Mean		0.0791	1.9272	4.0
SOLIDS		1085	7439-95-4	Magnesium	1200	to	25000	Study Mean		0.0685	134.2111	120
SOLIDS		1090	7439-96-5	Manganese	100	to	2000	Study Mean		0.0639	6.3268	10
SOLIDS		1095	7439-97-6	Mercury	1	to	35	Study Mean ± 40%				0.10
SOLIDS		1100	7439-98-7	Molybdenum	30	to	300	Study Mean		0.0910	0.8106	3.0
SOLIDS		1105	7440-02-0	Nickel	40	to	500	Study Mean ± 30%				4.0
SOLIDS		1125	7440-09-7	Potassium	1400	to	25000	Study Mean		0.0878	98.8140	140
SOLIDS		1140	7782-49-2	Selenium	40	to	400	Study Mean		0.0935	2.2902	4.0
SOLIDS		1150	7440-22-4	Silver	20	to	100	Study Mean		0.0910	0.4587	2.0
SOLIDS		1155	7440-23-5	Sodium	150	to	15000	Study Mean		0.1043	15.0068	15
SOLIDS		1160	7440-24-6	Strontium	40	to	400	Study Mean		0.0846	0.9208	4.0
SOLIDS		1165	7440-28-0	Thallium	40	to	400	Study Mean		0.0785	3.0637	4.0
SOLIDS		1175	7440-31-5	Tin	50	to	250	Study Mean		0.1134	3.0560	5.0
SOLIDS		1185	7440-62-2	Vanadium	40	to	400	Study Mean		0.0618	4.6801	4.0
SOLIDS		1190	7440-66-6	Zinc	100	to	1000	Study Mean ± 30%				10

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range			Acceptance Criteria [3,4,5,6]	a	b	c	d	TNI PTRL [7]
				Minerals	mg/kg								mg/kg
SOLIDS		1540	24959-67-9	Bromide	10	to	100	Study Mean		0.0848		0.3989	1.0
SOLIDS		1575	16887-00-6	Chloride	200	to	1000	Study Mean		0.0892		5.3941	20
SOLIDS		1730	16984-48-8	Fluoride	25	to	500	Study Mean		0.1781		2.0366	2.5
SOLIDS		1810	NA	Nitrate as N	25	to	500	Study Mean		0.0676		2.4605	2.5
SOLIDS		2000	14808-79-8	Sulfate	25	to	2000	Study Mean		0.1354		5.1265	2.5
				Nutrients	mg/kg								mg/kg
SOLIDS		1515	NA	Ammonia as N	300	to	3000	Study Mean		0.0931		39.0256	30
SOLIDS		1795	NA	Total Kjeldahl-Nitrogen (TKN)	400	to	4000	Study Mean		0.1361		21.2081	40
SOLIDS		1910	NA	Total Phosphorus	300	to	3000	Study Mean		0.2208		29.9538	30
				Misc Analytes	mg/kg								mg/kg
SOLIDS		1625	NA	Corrosivity (pH)	2	to	12 units	± 0.6 units fixed acceptance limit					not applicable
SOLIDS		1645	NA	Total Cyanide	20	to	200	Study Mean		0.1701		2.0819	2.0
SOLVENT		1780	NA	Ignitability	100	to	200 °F	± 17 °F fixed acceptance limit					not applicable

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range			Acceptance Criteria [3,4,5,6] a b c d	TNI PTRL [7]
				Volatile Aromatics [1]	µg/kg				µg/kg
SOLIDS		4375	71-43-2	Benzene	20	to	200	Assigned Value ±35% fixed acceptance limit	13
SOLIDS		4475	108-90-7	Chlorobenzene	20	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		4610	95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4615	541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4620	106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4765	100-41-4	Ethylbenzene	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		5005	91-20-3	Naphthalene	40	to	200	Assigned Value ±50% fixed acceptance limit	20
SOLIDS		5100	100-42-5	Styrene	40	to	200	Assigned Value ±35% fixed acceptance limit	26
SOLIDS		5140	108-88-3	Toluene	20	to	200	Assigned Value ±35% fixed acceptance limit	13
SOLIDS		5155	120-82-1	1,2,4-Trichlorobenzene	40	to	200	Assigned Value ±60% fixed acceptance limit	16
SOLIDS		5240	NA	m/p-Xylenes	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		5250	95-47-6	o-Xylene	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		5260	1330-20-7	Xylene (total) [8]	40	to	400	Assigned Value ±45% fixed acceptance limit	22
				Volatile Halocarbons [1]	µg/kg				µg/kg
SOLIDS		4395	75-27-4	Bromodichloromethane	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4400	75-25-2	Bromoform	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		4455	56-23-5	Carbon tetrachloride	20	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		4505	67-66-3	Chloroform	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4575	124-48-1	Chlorodibromomethane	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4570	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	40	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		4585	106-93-4	1,2-Dibromoethane (EDB, Ethylene dibromide)	20	to	200	Assigned Value ±35% fixed acceptance limit	13
SOLIDS		4630	75-34-3	1,1-Dichloroethane	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4635	107-06-2	1,2-Dichloroethane (Ethylene dichloride)	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4640	75-35-4	1,1-Dichloroethylene	20	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		4645	156-59-2	cis-1,2-Dichloroethylene	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4700	156-60-5	trans-1,2-Dichloroethylene	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4975	75-09-2	Methylene chloride (Dichloromethane)	20	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		4655	78-87-5	1,2-Dichloropropane	20	to	200	Assigned Value ±35% fixed acceptance limit	13
SOLIDS		4680	10061-01-5	cis-1,3-Dichloropropene	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		4685	10061-02-6	trans-1,3-Dichloropropylene	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		5105	630-20-6	1,1,1,2-Tetrachloroethane	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		5110	79-34-5	1,1,2,2-Tetrachloroethane	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		5115	127-18-4	Tetrachloroethylene (Perchloroethylene)	20	to	200	Assigned Value ±50% fixed acceptance limit	10
SOLIDS		5160	71-55-6	1,1,1-Trichloroethane	20	to	200	Assigned Value ±45% fixed acceptance limit	11
SOLIDS		5165	79-00-5	1,1,2-Trichloroethane	20	to	200	Assigned Value ±30% fixed acceptance limit	14
SOLIDS		5170	79-01-6	Trichloroethene (Trichloroethylene)	20	to	200	Assigned Value ±40% fixed acceptance limit	12
SOLIDS		5180	96-18-4	1,2,3-Trichloropropane	20	to	200	Assigned Value ±50% fixed acceptance limit	12

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				Volatile Ketone/Ethers [1]	µg/kg							µg/kg
SOLIDS		4315	67-64-1	Acetone	200	to	1000	0.8050	15.8965	0.2255	11.6574	20
SOLIDS		4410	78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	100	to	500	0.9457	-5.6053	0.1832	7.9158	10
SOLIDS		4860	591-78-6	2-Hexanone	100	to	500	Assigned Value ±50% fixed acceptance limit				50
SOLIDS		4995	108-10-1	4-Methyl-2-pentanone (MIBK)	100	to	500	Assigned Value ±50% fixed acceptance limit				50
SOLIDS		5000	1634-04-4	Methyl tert-butyl ether (MTBE)	20	to	200	Assigned Value ±40% fixed acceptance limit				12
				Medium Level Volatile Aromatics [1]	µg/kg							µg/kg
SOLIDS		4375	71-43-2	Benzene	1000	to	10000	Assigned Value ±25% fixed acceptance limit				750
SOLIDS		4475	108-90-7	Chlorobenzene	1000	to	10000	Assigned Value ±25% fixed acceptance limit				750
SOLIDS		4610	95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	1000	to	10000	Assigned Value ±25% fixed acceptance limit				750
SOLIDS		4615	541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)	1000	to	10000	1.0087	-3.5854	0.0610	72.1547	606
SOLIDS		4620	106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	1000	to	10000	0.9814	78.8567	0.0672	45.0983	723
SOLIDS		4765	100-41-4	Ethylbenzene	1000	to	10000	Assigned Value ±30% fixed acceptance limit				700
SOLIDS		5005	91-20-3	Naphthalene	2000	to	10000	1.0092	-147.4204	0.0896	204.0207	721
SOLIDS		5100	100-42-5	Styrene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		5140	108-88-3	Toluene	1000	to	10000	Assigned Value ±25% fixed acceptance limit				750
SOLIDS		5155	120-82-1	1,2,4-Trichlorobenzene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		5240	NA	m/p-Xylenes	1000	to	10000	Assigned Value ±30% fixed acceptance limit				700
SOLIDS		5250	95-47-6	o-Xylene	1000	to	10000	Assigned Value ±30% fixed acceptance limit				700
SOLIDS		5260	1330-20-7	Xylene (total) [8]	2000	to	20000	Assigned Value ±30% fixed acceptance limit				700

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				Medium Level Volatile Halocarbons [1]	µg/kg							µg/kg
SOLIDS		4395	75-27-4	Bromodichloromethane	1000	to	10000	Assigned Value ±35% fixed acceptance limit				650
SOLIDS		4400	75-25-2	Bromoform	1000	to	10000	Assigned Value ±40% fixed acceptance limit				600
SOLIDS		4455	56-23-5	Carbon tetrachloride	1000	to	10000	0.9879	26.1250	0.1091	69.0570	480
SOLIDS		4505	67-66-3	Chloroform	1000	to	10000	Assigned Value ±30% fixed acceptance limit				700
SOLIDS		4575	124-48-1	Chlorodibromomethane	1000	to	10000	Assigned Value ±30% fixed acceptance limit				700
SOLIDS		4570	96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4585	106-93-4	1,2-Dibromoethane (EDB, Ethylene dibromide)	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4595	74-95-3	Dibromomethane (Methylene bromide)	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4630	75-34-3	1,1-Dichloroethane	1000	to	10000	Assigned Value ±35% fixed acceptance limit				650
SOLIDS		4635	107-06-2	1,2-Dichloroethane (Ethylene dichloride)	1500	to	10000	0.9960	32.3273	0.0711	81.3421	930
SOLIDS		4640	75-35-4	1,1-Dichloroethylene	2000	to	10000	Assigned Value ±50% fixed acceptance limit				1000
SOLIDS		4645	156-59-2	cis-1,2-Dichloroethylene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4700	156-60-5	trans-1,2-Dichloroethylene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4975	75-09-2	Methylene chloride (Dichloromethane)	1000	to	10000	Assigned Value ±40% fixed acceptance limit				600
SOLIDS		4655	78-87-5	1,2-Dichloropropane	2000	to	10000	Assigned Value ±30% fixed acceptance limit				1400
SOLIDS		4680	10061-01-5	cis-1,3-Dichloropropene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		4685	10061-02-6	trans-1,3-Dichloropropylene	2000	to	10000	Assigned Value ±40% fixed acceptance limit				1200
SOLIDS		5105	630-20-6	1,1,1,2-Tetrachloroethane	1000	to	10000	0.9905	84.3577	0.0715	113.3756	520
SOLIDS		5110	79-34-5	1,1,2,2-Tetrachloroethane	1500	to	10000	0.9884	-45.8370	0.0927	188.2879	455
SOLIDS		5115	127-18-4	Tetrachloroethylene (Perchloroethylene)	1000	to	10000	1.0045	93.5934	0.1125	4.6555	747
SOLIDS		5160	71-55-6	1,1,1-Trichloroethane	1000	to	10000	Assigned Value ±40% fixed acceptance limit				600
SOLIDS		5165	79-00-5	1,1,2-Trichloroethane	1000	to	10000	Assigned Value ±35% fixed acceptance limit				650
SOLIDS		5170	79-01-6	Trichloroethene (Trichloroethylene)	1000	to	10000	0.9971	67.2206	0.0840	56.3450	643
SOLIDS		5180	96-18-4	1,2,3-Trichloropropane	1500	to	10000	Assigned Value ±45% fixed acceptance limit				825
				Medium Level Volatile Ketone/Ethers [1]	µg/kg							µg/kg
SOLIDS		4315	67-64-1	Acetone	4000	to	20000	0.9105	-72.7923	0.2023	70.9627	929
SOLIDS		4410	78-93-3	2-Butanone (Methyl ethyl ketone, MEK)	4000	to	20000	0.8688	472.7627	0.1877	295.7230	808
SOLIDS		4860	591-78-6	2-Hexanone	4000	to	20000	Assigned Value ±50% fixed acceptance limit				2000
SOLIDS		4995	108-10-1	4-Methyl-2-pentanone (MIBK)	4000	to	20000	Assigned Value ±50% fixed acceptance limit				2000
SOLIDS		5000	1634-04-4	Methyl tert-butyl ether (MTBE)	2000	to	10000	Assigned Value ±30% fixed acceptance limit				1400
				Volatile Petroleum Hydrocarbons	mg/kg							mg/kg
SOLIDS		9408	8006-61-9	Gasoline Range Organics (GRO) [9]	100	to	2000	Study Mean		0.1900	74.9808	10

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				Base/Neutrals [1]	µg/kg								µg/kg
SOLIDS		5500	83-32-9	Acenaphthene	1000	to	12000	Study Mean	0.1967		2.4526		100
SOLIDS		5505	208-96-8	Acenaphthylene	1000	to	12000	Study Mean	0.2110		0.8053		100
SOLIDS		5555	120-12-7	Anthracene	1000	to	12000	Study Mean	0.1677		68.9191		100
SOLIDS		5575	56-55-3	Benzo(a)anthracene	1000	to	12000	Study Mean	0.1671		20.6877		100
SOLIDS		5585	205-99-2	Benzo(b)fluoranthene	1000	to	12000	Study Mean	0.1929		23.6955		100
SOLIDS		5600	207-08-9	Benzo(k)fluoranthene	1000	to	12000	Study Mean	0.1966		5.3583		100
SOLIDS		5590	191-24-2	Benzo(g,h,i)perylene	1000	to	12000	Study Mean	0.1958		26.7399		100
SOLIDS		5580	50-32-8	Benzo(a)pyrene	1000	to	12000	Study Mean	0.1801		66.9233		100
SOLIDS		5660	101-55-3	4-Bromophenyl phenyl ether (BDE-3)	1500	to	15000	Study Mean	0.1949		25.3431		150
SOLIDS		5670	85-68-7	Butyl benzyl phthalate	1000	to	12000	Study Mean	0.2095		16.2887		100
SOLIDS		5765	111-44-4	bis(2-Chloroethyl) ether	1500	to	15000	Study Mean	0.2158		173.8570		150
SOLIDS		5760	111-91-1	bis(2-Chloroethoxy)methane	1000	to	12000	Study Mean	0.1953		88.5249		100
SOLIDS		4659	108-60-1	2,2'-Oxybis(1-chloropropane), bis(2-Chloro-1-methylethyl)ether [13]	1500	to	15000	Study Mean	0.2515		26.3474		150
SOLIDS		5795	91-58-7	2-Chloronaphthalene	1000	to	12000	Study Mean	0.2181		6.8913		100
SOLIDS		5825	7005-72-3	4-Chlorophenyl phenylether	1000	to	12000	Study Mean	0.2077		5.9161		100
SOLIDS		5855	218-01-9	Chrysene	1000	to	12000	Study Mean	0.1626		29.1501		100
SOLIDS		5895	53-70-3	Dibenz(a,h) anthracene	1000	to	12000	Study Mean	0.1868		81.9994		100
SOLIDS		5905	132-64-9	Dibenzofuran	1500	to	15000	Study Mean	0.1772		34.8698		150
SOLIDS		4610	95-50-1	1,2-Dichlorobenzene (o-Dichlorobenzene)	1500	to	15000	Study Mean	0.2786		81.9879		150
SOLIDS		4615	541-73-1	1,3-Dichlorobenzene (m-Dichlorobenzene)	1500	to	15000	Study Mean	0.3292		69.8039		150
SOLIDS		4620	106-46-7	1,4-Dichlorobenzene (p-Dichlorobenzene)	1500	to	15000	Study Mean	0.3249		28.1719		150
SOLIDS		6070	84-66-2	Diethyl phthalate	1000	to	12000	Study Mean	0.1952		14.2186		100
SOLIDS		6135	131-11-3	Dimethyl phthalate	1000	to	12000	Study Mean	0.1898		37.0036		100
SOLIDS		5925	84-74-2	Di-n-butyl phthalate	1000	to	12000	Study Mean	0.2232		24.5306		100
SOLIDS		6185	121-14-2	2,4-Dinitrotoluene (2,4-DNT)	1500	to	15000	Study Mean	0.1901		59.3569		150
SOLIDS		6190	606-20-2	2,6-Dinitrotoluene (2,6-DNT)	1500	to	15000	Study Mean	0.1804		16.8136		150
SOLIDS		6200	117-84-0	Di-n-octyl phthalate	1000	to	12000	Study Mean	0.2306		52.0201		100
SOLIDS		6065	117-81-7	Di(2-ethylhexyl) phthalate (bis(2-Ethylhexyl)phthalate, DEHP)	1500	to	15000	Study Mean	0.2109		100.6288		150
SOLIDS		6265	206-44-0	Fluoranthene	1000	to	12000	Study Mean	0.1909		27.4902		100
SOLIDS		6270	86-73-7	Fluorene	1000	to	12000	Study Mean	0.1714		57.1721		100
SOLIDS		4840	67-72-1	Hexachloroethane	1500	to	15000	Study Mean	0.3365		0.7453		150
SOLIDS		6275	118-74-1	Hexachlorobenzene	1500	to	15000	Study Mean	0.1713		4.7899		150
SOLIDS		4835	87-68-3	Hexachlorobutadiene	1500	to	15000	Study Mean	0.2252		61.2677		150
SOLIDS		6315	193-39-5	Indeno(1,2,3-cd) pyrene	1000	to	12000	Study Mean	0.2577		6.0686		100

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								a	b	c	d	
				Base/Neutrals cont' [1]	µg/kg							µg/kg
SOLIDS		6320	78-59-1	Isophorone	1500	to	15000	Study Mean		0.2107	52.3126	150
SOLIDS		6385	91-57-6	2-Methylnaphthalene	1000	to	12000	Study Mean		0.2027	28.7219	100
SOLIDS		5005	91-20-3	Naphthalene	1000	to	12000	Study Mean		0.2408	35.4651	100
SOLIDS		5015	98-95-3	Nitrobenzene	1500	to	15000	Study Mean		0.2129	84.7934	150
SOLIDS		6545	621-64-7	n-Nitrosodi-n-propylamine	1500	to	15000	Study Mean		0.2463	5.3389	150
SOLIDS		6615	85-01-8	Phenanthrene	1000	to	12000	Study Mean		0.1801	5.2498	100
SOLIDS		6665	129-00-0	Pyrene	1000	to	12000	Study Mean		0.2025	15.1287	100
SOLIDS		5155	120-82-1	1,2,4-Trichlorobenzene	1500	to	15000	Study Mean		0.1952	170.2017	150
				Acids [1]	µg/kg							µg/kg
SOLIDS		5700	59-50-7	4-Chloro-3-methylphenol	1500	to	15000	Study Mean		0.1989	52.6198	150
SOLIDS		5800	95-57-8	2-Chlorophenol	1500	to	15000	Study Mean		0.2418	15.4376	150
SOLIDS		6000	120-83-2	2,4-Dichlorophenol	1500	to	15000	Study Mean		0.2092	70.7176	150
SOLIDS		6400	95-48-7	2-Methylphenol (o-Cresol)	3000	to	15000	Study Mean		0.2419	113.6401	300
SOLIDS		6410	106-44-5	4-Methylphenol (p-Cresol) [10]	3000	to	15000	Study Mean ±3SD				300
SOLIDS		6490	88-75-5	2-Nitrophenol	3000	to	15000	Study Mean		0.2513	18.3228	300
SOLIDS		6500	100-02-7	4-Nitrophenol	3000	to	15000	Study Mean		0.3639	171.2300	300
SOLIDS		6625	108-95-2	Phenol	1500	to	15000	Study Mean		0.2381	26.3795	150
SOLIDS		6605	87-86-5	Pentachlorophenol	3000	to	15000	Study Mean		0.2714	282.8578	300
SOLIDS		6835	95-95-4	2,4,5-Trichlorophenol	1500	to	15000	Study Mean		0.2309	17.6405	150
SOLIDS		6840	88-06-2	2,4,6-Trichlorophenol	1500	to	15000	Study Mean		0.2031	72.3886	150
				PCBs [2,15]	mg/kg							mg/kg
SOLIDS		8880	12674-11-2	Aroclor-1016 (PCB-1016)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8885	11104-28-2	Aroclor-1221 (PCB-1221)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8890	11141-16-5	Aroclor-1232 (PCB-1232)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8895	53469-21-9	Aroclor-1242 (PCB-1242)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8900	12672-29-6	Aroclor-1248 (PCB-1248)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8905	11097-69-1	Aroclor-1254 (PCB-1254)	1	to	50	Study Mean		0.2239	0.1196	0.1
SOLIDS		8910	11096-82-5	Aroclor-1260 (PCB-1260)	1	to	50	Study Mean		0.2239	0.1196	0.1
				PCBs in Oil [2,15]	mg/kg							mg/kg
OIL		8880	12674-11-2	Aroclor-1016 (PCB-1016)	10	to	50	0.7712	1.1019	0.1919	0.7331	0.86
OIL		8885	11104-28-2	Aroclor-1221 (PCB-1221)	12	to	50	0.7712	1.1019	0.1919	0.7331	1.25
OIL		8890	11141-16-5	Aroclor-1232 (PCB-1232)	12	to	50	0.7712	1.1019	0.1919	0.7331	1.25
OIL		8895	53469-21-9	Aroclor-1242 (PCB-1242)	10	to	50	0.7712	1.1019	0.1919	0.7331	0.86
OIL		8900	12672-29-6	Aroclor-1248 (PCB-1248)	12	to	50	0.7712	1.1019	0.1919	0.7331	1.25
OIL	0100	8905	11097-69-1	Aroclor-1254 (PCB-1254)	10	to	50	0.7712	1.1019	0.1919	0.7331	0.86
OIL	0101	8910	11096-82-5	Aroclor-1260 (PCB-1260)	10	to	50	0.7712	1.1019	0.1919	0.7331	0.86

TNI PT for Accreditation
Fields of Proficiency Testing with PTRLs
Solid and Chemical Materials
Effective: October 1 , 2021

Blue = New Analyte Magenta = Changes

Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range			Acceptance Criteria [3,4,5,6]				TNI PTRL [7]
								a	b	c	d	
				Organochlorine Pesticides [1,14]	µg/kg							µg/kg
SOLIDS		7025	309-00-2	Aldrin	50	to	500	Study Mean		0.2024	1.8529	5.0
SOLIDS		7110	319-84-6	alpha-BHC (alpha-Hexachlorocyclohexane)	50	to	500	Study Mean		0.2004	3.1776	5.0
SOLIDS		7115	319-85-7	beta-BHC (beta-Hexachlorocyclohexane)	50	to	500	Study Mean		0.1788	9.4062	5.0
SOLIDS		7105	319-86-8	delta-BHC	50	to	500	Study Mean		0.2041	5.5821	5.0
SOLIDS		7120	58-89-9	gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	50	to	500	Study Mean		0.1955	6.0037	5.0
SOLIDS		7240	5103-71-9	cis-Chlordane, alpha-Chlordane	50	to	500	Study Mean		0.1876	0.6823	5.0
SOLIDS		7245	5566-34-7	gamma-Chlordane	50	to	500	Study Mean		0.1666	2.0584	5.0
SOLIDS		7250	12789-03-6	Chlordane (tech.)	100	to	1000	Study Mean		0.2357	1.1633	10
SOLIDS		7355	72-54-8	4,4'-DDD [14a]	50	to	500	Study Mean		0.1697	8.1705	5.0
SOLIDS		7360	72-55-9	4,4'-DDE [14a]	50	to	500	Study Mean		0.1818	4.4461	5.0
SOLIDS		7365	50-29-3	4,4'-DDT [14a]	50	to	500	Study Mean		0.2243	2.6522	5.0
SOLIDS		7470	60-57-1	Dieldrin	50	to	500	Study Mean		0.1672	4.0365	5.0
SOLIDS		7510	959-98-8	Endosulfan I	50	to	500	Study Mean		0.1824	5.0749	5.0
SOLIDS		7515	33213-65-9	Endosulfan II	50	to	500	Study Mean		0.2026	3.2251	5.0
SOLIDS		7520	1031-07-8	Endosulfan sulfate	50	to	500	Study Mean		0.2361	2.5159	5.0
SOLIDS		7540	72-20-8	Endrin [14b]	50	to	500	Study Mean		0.1435	7.1706	5.0
SOLIDS		7530	7421-93-4	Endrin aldehyde [14b]	50	to	500	Study Mean		0.2309	10.0975	5.0
SOLIDS		7535	53494-70-5	Endrin ketone [14b]	50	to	500	Study Mean		0.2190	2.7268	5.0
SOLIDS		7685	76-44-8	Heptachlor	50	to	500	Study Mean		0.1911	2.5619	5.0
SOLIDS		7690	1024-57-3	Heptachlor epoxide	50	to	500	Study Mean		0.1786	2.4451	5.0
SOLIDS		7810	72-43-5	Methoxychlor	50	to	500	Study Mean		0.2696	6.0889	5.0
SOLIDS		8250	8001-35-2	Toxaphene (Chlorinated Camphene)	200	to	2000	Study Mean ±3SD				20
				Herbicides [1]	µg/kg							µg/kg
SOLIDS		8545	94-75-7	2,4-D	100	to	1000	Study Mean ±3SD				10
SOLIDS		8560	94-82-6	2,4-DB	100	to	1000	Study Mean ±3SD				10
SOLIDS		8595	1918-00-9	Dicamba	100	to	1000	Study Mean ±3SD				10
SOLIDS		8620	88-85-7	Dinoseb (2-sec-butyl-4,6-dinitrophenol, DNBP)	100	to	1000	Study Mean ±3SD				10
SOLIDS		6605	87-86-5	Pentachlorophenol	100	to	1000	Study Mean ±3SD				10
SOLIDS		8655	93-76-5	2,4,5-T	100	to	1000	Study Mean ±3SD				10
SOLIDS		8650	93-72-1	Silvex (2,4,5-TP)	100	to	1000	Study Mean ±3SD				10

TNI PT for Accreditation
Fields of Proficiency Testing with PTRLs
Solid and Chemical Materials
Effective: October 1 , 2021

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range			Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]
				Petroleum Hydrocarbons	mg/kg							mg/kg
SOLIDS		9369	68334-30-5	Diesel Range Organics (DRO) [11]	300	to	3000	Study Mean		0.2097	7.5527	30
SOLIDS		1803	NA	n-Hexane Extractable Material (O&G)[12]	300	to	3000	Study Mean		0.1567	88.0394	30
				Low Level Polyaromatic Hydrocarbons (PAHs) [1]	µg/kg							µg/kg
SOLIDS		5500	83-32-9	Acenaphthene	100	to	1000	Study Mean		0.2258	2.4018	15
SOLIDS		5505	208-96-8	Acenaphthylene	150	to	1000	Study Mean		0.3181	4.1175	15
SOLIDS		5555	120-12-7	Anthracene	100	to	1000	Study Mean		0.1839	3.1705	10
SOLIDS		5575	56-55-3	Benzo(a)anthracene	50	to	500	Study Mean		0.1562	2.8639	5.0
SOLIDS		5585	205-99-2	Benzo(b)fluoranthene	50	to	500	Study Mean		0.1370	3.1001	5.0
SOLIDS		5600	207-08-9	Benzo(k)fluoranthene	50	to	500	Study Mean		0.1300	5.4343	5.0
SOLIDS		5590	191-24-2	Benzo(g,h,i)perylene	50	to	500	Study Mean		0.1724	4.5522	10
SOLIDS		5580	50-32-8	Benzo(a)pyrene	50	to	500	Study Mean		0.1771	3.7794	5.0
SOLIDS		5855	218-01-9	Chrysene	50	to	500	Study Mean		0.1884	0.0425	5.0
SOLIDS		5895	53-70-3	Dibenz(a,h) anthracene	50	to	500	Study Mean		0.1591	2.6430	5.0
SOLIDS		6265	206-44-0	Fluoranthene	50	to	500	Study Mean		0.1529	3.9780	10
SOLIDS		6270	86-73-7	Fluorene	50	to	500	Study Mean		0.2169	2.2266	5.0
SOLIDS		6315	193-39-5	Indeno(1,2,3-cd) pyrene	50	to	500	Study Mean		0.1330	6.2268	5.0
SOLIDS		5005	91-20-3	Naphthalene	150	to	1000	Study Mean		0.3079	1.5325	15
SOLIDS		6615	85-01-8	Phenanthrene	100	to	1000	Study Mean		0.1921	0.1970	10
SOLIDS		6665	129-00-0	Pyrene	50	to	500	Study Mean		0.1816	2.1374	5.0

TNI PT for Accreditation
Fields of Proficiency Testing with PTRLs
Solid and Chemical Materials
Effective: October 1 , 2021

Blue = New Analyte Magenta = Changes

Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]

1) For volatiles, base/neutrals, acids, organochlorine pesticides, herbicides and low level PAHs standards, providers must include a minimum number of analytes using the criteria described below:
PT samples that are to be scored for one to ten analytes must include all of these analytes.
PT samples that are to be scored for ten to twenty analytes must include at least ten of these analytes or 80% ot the total, whichever number is greater.
PT samples that are to be scored for more than twenty analytes must include at least sixteen of these analytes or 60% ot the total, whichever number is greater.
If the calculated percentage of the total number of analytes in the PT sample is a fraction, the fraction shall be rounded up to the next whole number.

2) One sample in every study, containing one Aroclor, selected at random from among the Aroclors listed above.

3) Acceptance limits are set at the Mean ± 3 Standard Deviations (SD).
Where the a, b, c and d factors are presented, Mean = a*T + b; SD = c*T + d where T is the assigned value.
Where the c and d factors are presented, Mean = Robust Study Mean; SD = c*X + d where X is the Robust Study Mean.
Where no factors are presented (Study Mean ±3SD), Mean = Robust Study Mean, SD = Robust Study Standard Deviation.
Robust Study Mean and Standard Deviation are generated using statistical analysis of study data set. (ie. Bi-weight, Grubbs, Dixon, etc.)

4) If the lower acceptance limit generated using the criteria contained in this table is less than 10% of the assigned value or the PTRL, the lower acceptance limits are set at 10% of the assigned value or the PTRL whichever is higher.

5) If the lower acceptance limit generated using the criteria contained in this table is greater than 90% of the assigned value, the lower acceptance limits are set at 90% of the assigned value except where fixed limits are used.

6) If the upper acceptance limit generated using the criteria contained in this table is less than 110% of the assigned value, the upper acceptance limits are set at 110% of the assigned value except where fixed limits are used.

7) TNI Proficiency Testing Reporting Limit (PTRL) is a statistically derived value that represents the lowest acceptable concentration for an analyte in a proficiency test sample, if the analyte is spiked into the proficiency test sample.

TNI PTRLs are also used by PT Providers to set the assigned value for unspiked analytes. For all analytes with an assigned value equal to <PTRL, the PT Provider must verify that the PT sample does not contain the analyte at a concentration greater than or equal to one-half (1/2) of the PTRL.

Refer to the "TNI V1M1 2016 Standard Update Guidance on Proficiency Testing Reporting Limit (PTRL)", GUID-3-114-Rev0, October 15, 2018 for further information.

8) Volatiles Aromatics must contain all three Xylene isomers. The concentration range of o-Xylene and m&p-Xylene is 20-200 ug/kg or 1000-10000 (Medium Level) each.

9) Gasoline Range Organics (GRO) per purge-and-trap extraction followed by chromatographic analysis. GRO is defined as the carbon range between n-C_5 and n-C_{10}.

10) Laboratories seeking to report data for Solid and Chemical Material analyte 4-Methylphenol or the coeluting isomer pair of 3-Methylphenol and 4-Methylphenol must report the data as 4-Methylphenol.

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Matrix	EPA Analyte Code	TNI Analyte Code	CAS Number	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	TNI PTRL [7]

11) Diesel Range Organics (DRO) per solvent extraction followed by chromatographic analysis. DRO is defined as the carbon range between n-C_{10} and n-C_{28}.

12) n-Hexane Extractable Material (HEM) per solvent extraction followed by gravimetric or infrared spectrometric analysis (Oil & Grease).

13) Also known as Bis(2-chloro-1-methylethyl) Ether, formerly known as Bis(2-chloroisopropyl) Ether.

14) These analytes are specified as part of a method defined and evaluated degradation process. PT sample designs for these analytes must conform to the following:
a) If the parent compound 4,4'-DDT is spiked into the PT sample, then its degradation products, 4,4'-DDD and 4,4'-DDE, must also be spiked into that PT sample.
b) If the parent compound Endrin is spiked into the PT sample, then its degradation products, Endrin aldehyde and Endrin ketone, must also be spiked into that PT sample.

15) A "Not Acceptable" evaluation of any one or more Aroclor Identifications constitutes a failure to demonstrate proficiency for all accredited Aroclors reported.

Proficiency Testing (PT) providers are an integral part of our environmental laboratory assessment program. We will be implementing a new electronic PT evaluation system that will greatly enhance and streamline our PT evaluation process. As such, we will be more reliant than ever on the electronic PT files provided to us by accredited PT providers.

PT files are submitted from vendors have the following requirements:

- Limit PT data files to only labs requesting accreditation in West Virginia
- PT file name must be unique, recognizable and indicate whether it is an amended file. For example, "ERA WP288 WV 21-0214"
- The data must be provided in a valid comma separated value (.csv) format with a single header row. Preferred column headings are specified in Table 1 below
- Fields shown in red are critical and must not be null. Only valid TNI method, analyte and provider codes are recognized. Fields with incorrect or missing data will not be processed

Figure 1. AB Manager PT File Format

Column Heading	Data Type	Notes and Examples
ProviderCode	text	TNIPTP99
ProviderName	text	XYZ Standards
StudyType	text	WS, WP, RCRA, etc.
StudyNumber	text	295
StudyMatrix	text	DW, NPW, S, A, or BT
OpenDate	date	For supplemental studies, this is the date shipped
CloseDate	date	For supplemental studies, this is the date submitted
ReportDate	date	Original issue date
AmendDate	date	May be blank
LabCode	text	EPA Lab code (preferred) or other ID used by both the PT provider and the AB
LabStateId	text	If provided by state
LabName	text	Metropolitan Water District
AnalyteCode	numeric	4-digit TNI analyte code (e.g., arsenic = 1010)
AnalyteName	text	Arsenic
MethodCode	numeric	8-digit TNI method code (e.g., EPA 200.8, rev 5.5 = 10014809)

Column Heading	Data Type	Notes and Examples
MethodName	text	e.g., Metals by ICP-MS
Evaluation	text	Acceptable or Not Acceptable
AnalysisDate	date	
Analyst	text	Name or initials
LabResult	numeric	Reported result
ResultUnits	text	Units (e.g., mg/L, mg/kg, etc.)
AssignedValue	numeric	True value
LAL	numeric	lower acceptance limits
UAL	numeric	upper acceptance limits

Fields shown in red must not be null

Attachment C

Proficiency Testing (PT) providers are an integral part of our environmental laboratory assessment program. We will be implementing a new electronic PT evaluation system that will greatly enhance and streamline our PT evaluation process. As such, we will be more reliant than ever on the electronic PT files provided to us by accredited PT providers.

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ProviderCode	text	TNIPTP99
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ReportDate	date	Original issue date
AmendDate	date	May be blank
LabCode	text	EPA Lab code (preferred) or other ID used by both the PT provider and the AB
LabStateId	text	If provided by state
LabName	text	Metropolitan Water District
AnalyteCode	numeric	4-digit TNI analyte code (e.g., arsenic = 1010)

Column Heading	Data Type	Notes and Examples
AnalyteName	text	Arsenic
MethodCode	numeric	8-digit TNI method code (e.g., EPA 200.8, rev 5.5 = 10014809)
MethodName	text	e.g., Metals by ICP-MS
Evaluation	text	Acceptable or Not Acceptable
AnalysisDate	date	
Analyst	text	Name or initials
LabResult	numeric	Reported result
ResultUnits	text	Units (e.g., mg/L, mg/kg, etc.)
AssignedValue	numeric	True value
LAL	numeric	lower acceptance limits
UAL	numeric	upper acceptance limits

Fields shown in red must not be null

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

State of West Virginia
Solicitation Response

Proc Folder:	1030855
Solicitation Description:	AB Manager Lab Accreditation System, or Equal
Proc Type:	Central Contract - Fixed Amt

Solicitation Closes	Solicitation Response	Version
2022-09-06 13:30	SR 0313 ESR08242200000001010	1

VENDOR

VS0000041211
AQS, Inc.

Solicitation Number: CRFQ 0313 DEP2300000007

Total Bid: 104925 **Response Date:** 2022-09-05 **Response Time:** 18:28:22

Comments:

FOR INFORMATION CONTACT THE BUYER
Joseph E Hager III
(304) 558-2306
joseph.e.hageriii@wv.gov

Vendor Signature X **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	Auto Lab Accreditation System, AQS AB Manager or Equal				37375.00

Comm Code	Manufacturer	Specification	Model #
81162000			

Commodity Line Comments:

Extended Description:

Vendor's bid for this item will include total cost for initial set-up, technical support, training, updates, enhancements and bug fixes for the initial year. Will also include maintenance and support for First Year.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Custom Programming and Support	120.00000	HOUR	125.000000	15000.00

Comm Code	Manufacturer	Specification	Model #
81112201			

Commodity Line Comments:

Extended Description:

Reference Specification 4.1.15.3 Vendor's bid will include total cost for any custom programming and support that may be requested over the course of the entire 5 year contract. Hours are estimated at 120 hours (for bidding purposes only). Vendor will only bill for actual hours pre-approved and used. Custom programming and support must be pre-approved in writing by a representative of the WV DEP.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Maintenance and Support Renewal for Year 2				12375.00

Comm Code	Manufacturer	Specification	Model #
81112201			

Commodity Line Comments:

Extended Description:

Vendor's bid will include total cost for all license subscriptions and maintenance and support (including any custom programming and support) for Renewal for Year 2.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Maintenance and Support Renewal for Year 3				12870.00

Comm Code	Manufacturer	Specification	Model #
81112201			

Commodity Line Comments:

Extended Description:

Vendor's bid will include total cost for all license subscriptions and maintenance and support (including any custom programming and support) for Renewal for Year 3.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Maintenance and Support Renewal for Year 4				13385.00

Comm Code	Manufacturer	Specification	Model #
81112201			

Commodity Line Comments:

Extended Description:

Vendor's bid will include total cost for all license subscriptions and maintenance and support (including any custom programming and support) for Renewal for Year 4.

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Maintenance and Support Renewal for Year 5				13920.00

Comm Code	Manufacturer	Specification	Model #
81112201			

Commodity Line Comments:

Extended Description:

Vendor's bid will include total cost for all license subscriptions and maintenance and support (including any custom programming and support) for Renewal for Year 5.