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Header

[List View](#)**General Information** [Contact](#) [Default Values](#) [Discount](#) [Document Information](#) [Clarification Request](#)**Procurement Folder:** 761566**SO Doc Code:** CRFQ**Procurement Type:** Central Contract - Fixed Amt**SO Dept:** 0506**Vendor ID:** VS0000013941 **SO Doc ID:** EHS2100000001**Legal Name:** Research Triangle Institute**Published Date:** 12/17/20**Alias/DBA:****Close Date:** 12/22/20**Total Bid:** \$170,000.00**Close Time:** 13:30**Response Date:** 12/21/2020 **Status:** Closed**Response Time:** 17:01**Solicitation Description:** TESTING FOR LEAD
CONTAMINATION IN SCHOOLS**Responded By User ID:** SKYEBRODISH **Total of Header Attachments:** 6**Total of All Attachments:** 6**First Name:** Skye[Email](#)**Last Name:** Brodish**Email:** sbrodish@rti.org**Phone:** 919-541-6451

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Contractor to provide cloud-based software/ platform				28347.00

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments:

Extended Description:

Spec 4.1.1 - Contractor to provide cloud-based software/platform
 Estimated Annual Quantity: 1
 Unit Price x Estimated Quantity=Total Price

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Managing the cloud-based software/platform				32856.00

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments:

Extended Description:

Managing the cloud-based software/platform
 Estimated Annual Quantity: 1
 Unit Price x Estimated Quantity=Total Price

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Provide Test Kits and Sample Analysis				80985.00

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments:

Extended Description:

Spec 4.1.3 - Provide Test Kits and Sample Analysis
 Estimated Annual Quantity: 1905
 Unit Price x Estimated Quantity=Total Price

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Provide training, consultation, and remediation services				27812.00

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments:

Extended Description:

Spec 4.1.4 - Provide training, consultation, and remediation services
 Estimated Annual Quantity: 80
 Unit Price x Estimated Quantity=Total Price

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
5	Commodity Line deleted from solicitation				

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments: Commodity Line deleted from solicitation

Extended Description:

Spec 4.1.1 - Contractor to provide cloud-based software/platform
 Estimated Annual Quantity: 1
 Unit Price x Estimated Quantity=Total Price

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
6	Commodity Line deleted from solicitation				

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments: Commodity Line deleted from solicitation

Extended Description:

Commodity Line deleted from solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
7	Commodity Line deleted from solicitation				

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments: Commodity Line deleted from solicitation

Extended Description:

Commodity Line deleted from solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
8	Commodity Line deleted from solicitation				

Comm Code	Manufacturer	Specification	Model #
60104202			

Commodity Line Comments: Commodity Line deleted from solicitation

Extended Description:

Commodity Line deleted from solicitation



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

State of West Virginia
 Centralized Request for Quote
 Public Safety

Proc Folder: 761566		Reason for Modification:	
Doc Description: TESTING FOR LEAD CONTAMINATION IN SCHOOLS		ADDENDUM 2 TO PROVIDE ANSWERS TO VENDOR QUESTIONS	
Proc Type: Central Contract - Fixed Amt			
Date Issued	Solicitation Closes	Solicitation No	Version
2020-12-17	2020-12-22 13:30	CRFQ 0506 EHS210000001	3

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: VS0000013941
Vendor Name : Research Triangle Institute (RTI International)
Address : P.O. Box 12194
Street : 3040 East Cornwallis Road
City : Research Triangle Park
State : North Carolina **Country :** USA **Zip :** 27709-2194
Principal Contact : Skye Brodish
Vendor Contact Phone: 919-541-6451 **Extension:** N/A

FOR INFORMATION CONTACT THE BUYER

Crystal G Hustead
 (304) 558-2402
 crystal.g.hustead@wv.gov

Vendor Signature X  **FEIN#** 56-0686338 **DATE** 12/21/2020

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

ADDITIONAL INFORMATION

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DEPARTMENT OF HUMAN SERVICES, OFFICE OF ENVIRONMENTAL HEALTH, IS SOLICITING BIDS TO ESTABLISH A CONTRACT FOR THE PURCHASE OF A CONTRACTOR TO PROVIDE TESTING FOR LEAD CONTAMINATION IN DRINKING WATER AT SCHOOLS AND CHILDCARE PROGRAMS PER THE ATTACHED DOCUMENTS.

QUESTIONS REGARDING THE SOLICITATION MUST BE SUBMITTED IN WRITING TO CRYSTAL.G.HUSTEAD@WV.GOV PRIOR TO THE QUESTION PERIOD DEADLINE CONTAINED IN THE INSTRUCTIONS TO VENDORS SUBMITTING BIDS

INVOICE TO	SHIP TO
HEALTH AND HUMAN RESOURCES BUREAU FOR PUBLIC HEALTH ENVIRONMENTAL HEALTH SERVICES 350 CAPITOL ST, RM 313 CHARLESTON WV 25301-1757 US	HEALTH AND HUMAN RESOURCES BPH - ENVIRONMENTAL HEALTH SERVICES 350 CAPITOL ST, RM 313 CHARLESTON WV 25301-1757 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Contractor to provide cloud-based software/ platform	1	1	28,347	28,347

Comm Code	Manufacturer	Specification	Model #
60104202	N/A	N/A	N/A

Extended Description:

Spec 4.1.1 - Contractor to provide cloud-based software/platform
Estimated Annual Quantity: 1
Unit Price x Estimated Quantity=Total Price

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Managing the cloud-based software/platform	1	1	32,856	32,856

Comm Code	Manufacturer	Specification	Model #
60104202	N/A	N/A	N/A

Extended Description:

Managing the cloud-based software/platform
Estimated Annual Quantity: 1
Unit Price x Estimated Quantity=Total Price

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Provide Test Kits and Sample Analysis	1	1905	80,985	80,985

Comm Code	Manufacturer	Specification	Model #
60104202	N/A	N/A	N/A

Extended Description:

Spec 4.1.3 - Provide Test Kits and Sample Analysis
 Estimated Annual Quantity: 1905
 Unit Price x Estimated Quantity=Total Price

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Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Provide training, consultation, and remediation services	1	80	27,812	27,812

Comm Code	Manufacturer	Specification	Model #
60104202	N/A	N/A	N/A

Extended Description:

Spec 4.1.4 - Provide training, consultation, and remediation services
 Estimated Annual Quantity: 80
 Unit Price x Estimated Quantity=Total Price

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Comm Code	Manufacturer	Specification	Model #
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Comm Code	Manufacturer	Specification	Model #
60104202	N/A	N/A	N/A

Extended Description:
Commodity Line deleted from solicitation

SCHEDULE OF EVENTS

Line	Event	Event Date
1	TECHNICAL QUESTION DEADLINE	2020-12-04

	Document Phase	Document Description	Page
EHS210000001	Final	TESTING FOR LEAD CONTAMINATION IN SCHOOLS	6

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

RTI Budget Narrative

Overview

RTI's budget for the EPA WIIN – West Virginia is presented in Fixed Price format. The total RTI budget for the requested period of performance (ending September 30, 2021) is \$170,000. This budget reflects RTI's comprehensive approach to testing lead in drinking water at West Virginia schools and childcare facilities in accordance with the full scope of the RFP and U.S. Environmental Protection Agency's (EPA's) 3Ts.

Key Budget Assumptions

RTI's budget estimate is based on the following general assumptions:

Task	Task Description	Task Assumptions
1	Spec 4.1.1: contractor to provide cloud-based software/platform	<p>RTI will host and update our Clean Water for U.S. Kids cloud based platform at www.cleanwaterforcarolinakids.org with a West Virginia portal.</p> <p>RTI will share data from the portal, and the public facing component of the portal is publicly available. The portal itself is designed for use as a service-based software, thus there is not an ownership transfer of the domain or application to West Virginia. Instead, all data are shared and available on the platform or for separate download.</p>
2	Managing the cloud-based software/platform	<p>Based on our current experience supporting WIIN work in North Carolina, we are assuming an annual cost of \$32,856 for support of all aspects of the online portal, which includes AWS hosting + domain/SSL fees (\$3,090) and our Zendesk customer support portal.</p>
3	Spec 4.1.3: provide test kits and sample analysis	<p>~1,905 sample analyses + 145 retest flush samples will be performed.</p> <p>RTI estimates that most consumables will be purchased from Scientific Sales, Inc., a small, woman-owned, certified minority-owned business.</p> <p>RTI will cover the expense of resending up to 5% of sample kits to schools and childcares to assist with sampling and shipping issues, including lost kits. Based on our experience in North Carolina, we expect issues with sample kits to be at or below this value. If the number of resent kits exceeds this amount, RTI will work with West Virginia OEHS to devise an alternative strategy to provide additional kits within program resources.</p>

4	Spec 4.1.4: provide training, consultation, and remediation services	<p>We will provide technical support to all West Virginia schools and childcare centers that request it. This includes webinars, videoconferences, phone calls, and emails. We also have video-based and written training materials that we will share with all interested participants.</p> <p>Our experience with community partnership and recruiting can also benefit West Virginia’s enrollment efforts. We plan to provide webinars to all interested participants prior to enrollment to ensure that citizen science training has been effective prior to individual school or center testing. With our up-front training plan, we expect our customer support requests via Zendesk to not exceed the available program resources.</p>
All	Whole project	We will complete the above activities within grant resources.

Project Role Descriptions:

Jennifer Hoponick Redmon, *Program Director*, will be the primary line of communication between RTI and the state of West Virginia and overall manager for RTI staff efforts. She will ensure that project deliverables, timelines, budgets, and requirements are met and oversee all program staff and technical work documents before finalization.

AJ Kondash, *Program Coordinator*, will provide key day-to-day support to coordinate work efforts among the program team; prepare sample analysis reports, paperwork tracking reports, sample kits report, and ad hoc reports; help program manager ensure the program is operating in a timely and accurate fashion.

Keith Levine, *Analytical Chemistry Director*, will ensure laboratory function by coordinating with laboratory manager and program managers.

Andrea McWilliams, *Quality Assurance Officer*, will monitor all aspects of QA and QC, including data coming to RTI from schools and childcare centers, laboratory analysis, and online enrollment and reporting.

Frank Weber, *Laboratory Manager*, will oversee all laboratory activities and chemists who perform technical tasks related to sample custody, laboratory analysis, and initial data review.

Joe Johnson, *Lead Software Engineer*, will ensure functionality of West Virginia web portal, including adapting and maintaining it.

Laureen Stella, *Logistics Coordinator*, will perform administrative tasks to support the project, along with coordination, preparation, and shipment of sample kits to schools. She will oversee sample handling.

Technical Proposal

RTI Proposal No. 0282100.344
RFP No. CRFQ EHS2100000001

December 21, 2020



Testing for Lead Contamination in West Virginia Schools

Submitted To

West Virginia Purchasing Division
Attn: Crystal Hustead, Senior Buyer
2019 Washington Street, E.,
Capitol Complex Building 15
Charleston, WV 25305
Telephone: (304) 558-2402; x57504
Email: Crystal.G.Hustead@wv.gov

Submitted By

RTI International
P.O. Box 12194
Research Triangle Park, NC
27709-2194
<http://www.rti.org/>

**RTI Administrative
Point of Contact**

Skye Brodish
Office of Contracts
Telephone: (919) 541-6451
Email: sbrodish@rti.org

delivering **the promise of science**
for global good



RTI International
Proposal No. 0282100.344

This proposal includes data that shall not be disclosed outside the Government and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of—or in connection with—the submission of these data, the Government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Government’s right to use information contained in these data if obtained from another source without restriction. The data subject to this restriction are contained in the entire proposal.

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3.5. The State seeks a Consultant that can complete a Quality Assurance Project Plan (QAPP), Quality Management Plan (QMP) and data competency certification package prior to beginning sampling and testing required by the WIIN Grant 2107 program and before sampling starts. Please provide an example of completed QMP & QAPP quarterly and annual reporting.....	7
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1. PURPOSE AND SCOPE

RTI International will adhere to the West Virginia Office of Environmental Health Services (OEHS) and U.S. Environmental Protection Agency (EPA) objectives to test schools and childcare centers for lead contamination in drinking water following EPA’s Training, Testing, and Taking Action (3Ts) guidance to successfully support West Virginia in this bid. Specifically, RTI will:

- **Communicate** the goals, results, and important information about the program throughout implementation to keep the public, parents, teachers, and the larger community informed, along with the State of West Virginia grant contacts and the EPA
- **Train** the school and childcare community about the risks of lead in drinking water, how to collect and ship samples for lead testing, and solidify key partnerships to support the program
- **Test** by using EPA 3Ts testing protocols and RTI’s laboratory, which is certified by the West Virginia Office of Laboratory Services
- **Take action**, including developing a plan for responding to results of testing and addressing, where necessary, potential elevated lead.

2. DEFINITIONS

2.1. “Contract Services” means testing for lead contamination in drinking water at schools and childcare programs as more fully described in these specifications.

2.2. “Pricing Page” means the pages contained in wvOASIS, upon which the 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.

3. QUALIFICATIONS

By selecting solely RTI for contract award, the West Virginia OEHS would directly realize the following benefits:

- Our “one-stop shop” can handle all statewide aspects of this Request for Proposal. RTI is an independent, nonprofit research institute with multidisciplinary expertise in laboratory science, environmental health risk communication, information technology, logistics, and technical training.
- Our approach uses citizen-science approach with mail-out sample kits, paired with an online enrollment, tracking, communication and reporting platform, so school and childcare center staff can complete all field work—even during the coronavirus 2019 (COVID-19) pandemic.
- RTI’s Analytical Sciences Laboratory currently has a pending application for certification by reciprocity from West Virginia’s Department of Health and Human Resources Office

of Laboratory Services. RTI is currently certified by North Carolina's Division of Health and Human Services (DHHS) for metals (including lead) in drinking water utilizing EPA Method 200.8 (license number [REDACTED]).

- Project start-up will be seamless because RTI is currently operating North Carolina's Water Infrastructure Improvements for the Nation (WIIN) grant program in accordance with EPA's 3Ts. We have enrolled approximately 2,000 childcare centers and processed approximately 7,500 drinking water samples, leveraging our experienced team, available equipment, EPA-approved quality assurance (QA) documents, proven web-based portal, and certifications.
- RTI received Harvard Kennedy School's 2020 Roy Award¹ for Environmental Partnership based on the ingenuity, transferability, and scalability of our approach to identifying and mitigating a critical environmental problem: lead in children's drinking water.

3.1. Consultant must have demonstrated familiarity with implementing the US EPA's 3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities Manual and have familiarity in working with licensed childcare facilities, schools, water utilities and government agencies.

RTI Response—Familiarity with 3Ts and Working with Centers and Schools

RTI is committed to addressing lead in drinking water in schools and childcare centers by testing, educating, and contributing to an overall reduction of childhood lead exposure.

With funding appropriated under Section 1464(d) of the Safe Drinking Water Act, amended by the WIIN Act WIIN Section 2107, RTI welcomes the opportunity to assist in the program established by West Virginia OEHS with the voluntary participation of schools and childcare programs. This effort may include prioritization of schools serving younger children (aged 6 years and younger), underserved and low-income communities, and schools that are older and more likely to contain lead plumbing.

RTI is using EPA's 3Ts guidance to perform the following tasks:

- **Communicate**, throughout implementation of the program, the results and important lead information to the public, parents, teachers, and the larger community
- **Provide training** about the risks of lead in drinking water while training them to test for lead in their drinking water, developing and testing for lead, and developing key partnerships to support the program
- **Test** by using appropriate testing protocols and our on-site laboratory with pending certification from the West Virginia Office of Laboratory Services
- **Take action**, including developing a plan for responding to results of testing conducted and addressing, where necessary, potential elevated lead.

We regularly communicate with and support licensed childcare facilities, schools, government agencies, and water utilities in our lead testing program. We will develop and implement an

¹ For more information about our Roy Award for Environmental Partnership, see <https://www.belfercenter.org/publication/clean-water-carolina-kids-program-wins-harvards-roy-award-environmental-partnership>.

affordable, sustainable lead testing program in West Virginia that will include schools and childcare centers, along with regular communication with additional stakeholders such as government agencies and water utilities. Through our experience and expertise, we will help these stakeholders meet or exceed the goals set forth in the solicitation to reduce children's exposure to lead in drinking water.

We will use EPA's 3Ts guidance for a two-step sampling protocol with initial sampling and follow-up and 30-second flush sampling for schools that have results over the 15-parts per billion (ppb)–guideline.

RTI's suite of established training materials and our experience with distributing these materials in North Carolina will directly benefit West Virginia OEHS and accelerate the grant progress. Importantly, the West Virginia OEHS can be confident in RTI's approach because we believe and follow EPA's 3Ts guidance and because our successful work in North Carolina is occurring under an EPA-approved Quality Assurance Project Plan (QAPP) and Quality Management Plan (QMP).

3.2. Consultant shall have a minimum of 3 years prior experience in administering lead testing in schools and childcare facilities.

RTI Response—Experience in Testing Lead at Schools and Childcare Facilities

RTI is an organization with almost 6,000 employees across a variety of technical disciplines, including environmental health and laboratory analysis. Our cross-disciplinary team has the resources, knowledge, and hands-on experience to successfully perform all work listed in the RFP. **Importantly, RTI has been administering lead testing in schools and childcare facilities since 2016.** RTI has ample capacity to enroll and train schools and childcare programs, create sampling kits and ship them to enrolled schools, analyze samples, share reported results, follow 3Ts-based guidance, and provide technical support throughout this project. Our approach has been tested and refined, and our staff have worked together successfully on similar projects, including North Carolina's current WIIN program.

We will leverage our innovative and feasible approach to roll out West Virginia's WIIN program quickly and effectively to protect children's health. Our technical approach uses an online portal and mails out sample kits, thereby allowing for simple, efficient communication, quick testing turnaround, and understandable school and childcare center training. All of our work can be completed expediently outside of the State of West Virginia, regardless of the COVID-19 pandemic. RTI's nonprofit status includes government rates for shipping, so our overnight or 1-day shipping costs are similar to in-state costs. Finally, our expert staff are already experienced with facilitating training and communication with schools and childcare centers and will be available throughout the program via telephone, videoconferences, webinars, and emails to provide program and sampling support.

The key RTI staff proposed to support this effort have more than 100 years of combined experience in supporting projects and initiatives that involve water quality, environmental health, environmental exposure, risk communication, and risk mitigation. This combined experience includes 45 years in managing analytical chemistry laboratories and more than 60 publications in laboratory analysis and inorganic analysis, including lead. Importantly, all proposed key personnel have experience with supporting North Carolina's WIIN grant effort and have the capacity to conduct the proposed scope of work for West Virginia.

The lines of communication for key personnel are presented in **Exhibit A1** of **Appendix A**, and their responsibilities are shown in **Exhibit A2**. Each role is essential for successful implementation of this proposed program. RTI's key personnel are well versed in WIIN program support and regularly interact with each other to ensure that the cross-disciplinary work is carried out as planned and remains on time and within budget. There will be regular communication between West Virginia OEHS and the RTI Program Manager, Ms. Jennifer Redmon, and as needed with other RTI staff. These staff are already in place and working together as a cohesive project team in support of North Carolina's WIIN work, so project start-up time and costs will be minimal.

3.3. Consultant shall have a minimum of 3 years prior experience in administering lead testing in drinking water programs.

RTI Response—Experience in Lead Testing in Drinking Water Programs

RTI has an extensive history of lead testing and scientific stature built over more than four decades. Our work has included the design and implementation of long-standing proficiency testing programs for lead in paint, soil, and dust. Our work has also included the development and promulgation of federal reference methods for environmental monitoring of lead, design of field assays, and highly cited bioanalytical lead research. In 2016, we expanded our research portfolio to include lead in water and obtained certification utilizing EPA Method 200.8 for lead analysis. **Exhibit A3** provides information about three recent projects and associated contact information for the project clients. These projects describe our ability to provide exemplary work and maintain strict cost control while administering a lead testing in drinking water program.

Lead in Drinking Water Experience at NC Schools and Childcare Facilities since 2017

During 2016, we designed the Clean Water for Carolina Kids study to characterize lead in drinking water at schools and childcare centers by implementing a citizen-scientist approach, in which we trained childcare center staff on how to collect water samples, on understanding the dangers of lead in water, and how to take action to fix problems. Our study showed both the need for and the feasibility of our approach. Because of the success of our study, RTI invested internal research and development resources to scale up our approach. Our online portal (<https://www.cleanwaterforuskids.org/>) is in use to facilitate enrollment, training, tracking, store laboratory analytical data, and report results in an easy-to-use framework that adheres to EPA's WIIN reporting specifications. Our feasible citizen-scientist approach is being implemented in North Carolina through WIIN grant funding. We are currently partnering with North Carolina DHHS and the North Carolina State Laboratory of Public Health to conduct training, facilitate enrollment, and support risk mitigation in our North Carolina program. Additionally, RTI received Harvard Kennedy School's 2020 Roy Award for Environmental Partnership² based on the ingenuity, transferability, and scalability of our approach to identifying and mitigating a critical environmental problem: lead in children's drinking water.

² For more information about this award, see <https://www.belfercenter.org/publication/clean-water-carolina-kids-program-wins-harvards-roy-award-environmental-partnership>

3.4. Consultant must have the ability to assist the state in developing a lead testing in drinking water in school strategy that supports a robust training, monitoring, and maintenance plan that protects children from lead exposure now and in the future.

RTI Response—Development of Lead Testing in Drinking Water Strategy

Our proposed strategy is innovative, effective, and—most importantly for the State of West Virginia—scalable and transferable. We are well positioned to transfer our approach for lead testing and mitigation efforts in the State of North Carolina to a new partnership tailored for the State of West Virginia that protects children from lead exposure now and in the future. RTI has experience and expertise with implementing a statewide lead testing program, training citizen-scientists to properly sample their facilities, producing quality documents (e.g., sampling plans, QAPPs, QMPs), and establishing an online enrollment portal to identify sources for sampling and plumbing profiles. Additionally, because our technical approach primarily uses an online portal and mails out sample kits, our work can be completed outside of the State of West Virginia and during COVID-19 travel restrictions (and associated uncertainty) without pause (if schools can be open for sampling). RTI’s nonprofit status includes government rates for shipping, so our overnight or 1-day shipping costs are similar to in-state costs. The maintenance of our approach and online system is built into the program, so follow-up training, testing, monitoring, and remediation recommendations can easily be provided on a routine and ongoing basis.

The remainder of this section of our proposal further summarizes our strategy to prioritize schools and childcare programs to protect the most vulnerable children against the effects of lead exposure and how we plan to monitor progress. In addition, this section of the proposal also summarizes how we ensure that we are advancing a robust strategy in the State of West Virginia that trains schools and childcare centers to maintain the recommendations provided in our program to reduce or eliminate lead in drinking water.

Testing Plan Development: Prioritization

We are proposing to seek enrollment of any schools or childcare programs that would like to sign up for the proposed program. Interested school and childcare center administrators will receive information on how to sign up at our online Clean Water for Carolina Kids portal (www.cleanwaterforuskids.org). This portal is accessible by smart phone with regular cellular service and by computer with Internet service. If we have more enrollment than the initial WIIN grant funding capacity, then we have built questions into our portal that are designed to bin schools and childcare centers into two-tiers: those that need more support and those that need less support:

- The testing plan includes financial questions that ask how many children receive free or reduced lunch and how many children have subsidies, discounts, or scholarships.
- The plan includes a racial prioritization question that asks how many children enrolled identify as white versus other races or ethnicities.
- We also obtain information about the age of the building and about the plumbing profile in the building information section as another way to target under-resourced communities that are more likely to have elevated lead in drinking water.

Our prioritization structure is to first test where there are the following:

- Children aged 6 years and younger (e.g., childcare centers and elementary schools that include Head Start and pre-kindergarten programs)
- Other elementary schools
- Any childcare centers and schools in underserved or low-income communities or communities of color
- Any higher-risk schools built before the 1988 Lead Contamination Act.

These factors will influence the mail-out test kit methodology and sequence.

Enrollment and Sample Status Tracking

We designed the online portal to track enrollments and the number of samples requested by each participant, divided into unprocessed enrollments, outbound shipments, inbound shipments, samples received and awaiting laboratory analysis, and samples analyzed. In addition to tracking samples, the program administration section of our online portal can be used to view, download, and upload data from individual schools and childcare centers with initial results or following confirmatory, 30-second flush sampling results.

Tracking Schools That Complete Initial Sampling

Using the www.cleanwaterforuskids.org portal for the State of West Virginia, RTI and system administrators at West Virginia OEHS can track schools and childcare centers that complete initial sampling in the program, with the portal providing information about which schools and centers have requested samples, which are pending, and which have yet to start the program.

Tracking Schools with Lead Concentrations at or above 15 ppb

We will use data from the online repository to generate reports. These reports will be used to track the schools and childcare centers that have lead concentrations at or above 15 ppb. Schools and childcare centers with samples containing lead measured at or above than 15 ppb will also receive a special notification email from the RTI portal that confirmatory sampling is required for the specified tap or taps, with the West Virginia OEHS points of contact copied if they so desire. We will generate a full tracking report for each school and childcare center, documenting the dates and times when each step of the registration, analysis, and reporting process occurred. The report will summarize the results for each school and childcare center, including those that prompted the elevated lead notification and the need for additional sampling.

Tracking Schools That Order Sample Kits for Mitigation or Confirmation Sampling

In addition to tracking initial sample kits requested and completed, our online portal can track the kits for confirmation sampling; the portal flags these kits as different from initial sample kits.

Data Collection and Tracking of School Actions

The data collection and school and childcare center tracking on the online portal can be used by West Virginia OEHS stakeholders to view lead mitigation actions that the school or childcare center enters, along with confirmatory, 30-second flush samples used to confirm high lead levels and effectiveness of mitigation.

We will provide documentation of sampling by the school or childcare center in a facility-specific laboratory report, which the facility may publicly share for notice of performance, as

well as in an online public results mapper, which provides the public with notice of the facility outlets that were tested and the corresponding results.

Laboratory reports may serve as a certification that testing was completed, with additional laboratory reports for schools that have initial samples containing lead at or above 15 ppb.

We will create a public geographic information systems (GIS) data mapper, similar to the one available at www.cleanwaterforcarolinakids.org, for the State of West Virginia.

Communication, Coordination, and Customer Service

A key facet of our online portal is to provide standardized school and childcare center-specific communications at each stage, from enrollment through sample shipment, sample return, laboratory analysis, reporting, and risk mitigation. We will upload final sample results from each school or childcare center into the Clean Water for U.S. Kids portal; this action will automatically generate a results report to inform the facility and West Virginia OEHS of the results within 7 calendar days of the completed analysis. Furthermore, the results report will include recommendations to mitigate or remediate risks that are specific to each outlet, along with generalized risk mitigation recommendations. We will tailor these recommendations for the State of West Virginia pursuant to instructions from West Virginia OEHS and will follow the EPA 3Ts-approved guidance.

Once the initial and any necessary follow-up sampling efforts have completed, we will include a completed Public Notice Form that is tailored for the State of West Virginia as the final page of the results transmittal. If any sampling complications arise, such as leaky bottles, incorrectly sampled locations, or missed samples, then RTI will ship additional or replacement sample bottles as needed to the schools or childcare centers. When samples pre-filled on the Chain-of-Custody Form are not collected, the lead concentration will be listed as “Sample Missing” (SM) in the results report, and RTI will contact the school or childcare center about shipping new sample kits. If schools or childcare centers have questions, they can contact us on our customer support page by telephone or email here (<https://www.cleanwaterforuskids.org/contact>).

3.5. The State seeks a Consultant that can complete a Quality Assurance Project Plan (QAPP), Quality Management Plan (QMP) and data competency certification package prior to beginning sampling and testing required by the WIIN Grant 2107 program and before sampling starts. Please provide an example of completed QMP & QAPP quarterly and annual reporting.

RTI Response—QAPP, QMP, and Data Competency

The West Virginia OEHS will directly benefit from choosing RTI for contract award because the Institute has already received EPA Region 4 approval of our QAPP and QMP in support of North Carolina’s WIIN grant. We can readily adapt our current approved QAPP and QMP and submit the data competency package needed for work in the State of West Virginia.

Accreditation and Certification

RTI currently has primary certification through North Carolina State Laboratory of Public Health for metals (including lead) in drinking water following EPA Method 200.8. RTI also has a pending application for certification by reciprocity through West Virginia’s Department of Health and Human Resources Office of Laboratory Services for metals (including lead) in drinking water following EPA Method 200.8. Certifications are renewed annually and require

analysis of performance testing samples on a semi-annual basis. The certification from North Carolina was renewed July 2020.

RTI's Analytical Sciences Laboratory follows detailed QA policies and procedures based on guidance provided in EPA QA/G-5, EPA Guidance for QAPPs (EPA/240/R-02/009, December 2002), and in guidance set forth in EPA's Good Laboratory Practices. RTI staff also possess the technical knowledge required to successfully perform the tasks outlined in the RFP and uses Standard Operating Procedures (SOPs) when conducting work, as well as accepted analytical procedures designed to ensure that all events affecting the quality of the data are known, well documented, and scientifically defensible.

Data Competency

We received EPA WIIN Grant approval for our data competency plan for our related grant in the State of North Carolina and plan to adapt our current data competency approach for the State of West Virginia. The testing laboratory is integrated with the online data management platform. This platform, which specializes in capturing, storing, and analyzing time-series environmental data, will serve as the data management platform during the school testing process. RTI's validated laboratory instruments automatically associate barcoded samples tied to individual school testing points and transfer measured results to the online portal database management system for subsequent quality control (QC) review. RTI employs a three-tiered data review process (Analyst, Laboratory Manager, and QA Officer), and we will electronically transmit laboratory analysis results to the online platform. When results are available, the online portal will submit emails to the facilities, prompting them to log in to view the results. Physical mailing of results will be available for schools or childcare centers without email access or if requested.

QAPP and QMP

RTI developed a QAPP for activities that involve the collection or use of environmental measurement data in accordance with EPA QA/R-5, EPA Requirements for QAPPs, for the North Carolina WIIN grant. The QAPP was reviewed favorably by EPA Region 4.

Development of program quality documents involves implementation and interaction of many related identifiable elements. Specifically, project QA staff, in collaboration with the project management staff and West Virginia OEHS, will coordinate the activities under this quality system to produce the type, quantity, and quality of information needed by EPA within resource constraints.

Types of documentation that will be prepared for this program can include the following:

- Planning documentation (e.g., QMP)
- Implementation documentation (i.e., supporting QA records)
- Assessment documentation (i.e., QA audit reports)
- Sample shipment and receipt documentation (e.g., Chain-of-Custody Forms, sample tracking information, site information)
- Laboratory documentation (e.g., training files, SOPs, Laboratory QAPP, sampling plan, and corrective action reports).

Documentation procedures and protocols in the laboratory are addressed within SOPs, analytical methods, user's manuals for the instruments, and the Laboratory QAPP. Laboratory staff will

capture the following records: Chain-of-Custody forms, laboratory notebooks, calibration records, control charts, raw data records, and bench sheets.

Additionally, we have developed and instituted document control mechanisms for the review, revision, and distribution of QMP and the QAPP. Each document has a signed approval form, title page, table of contents, and EPA-approved document-control format.

QMP and QAPP Required Quarterly and Annual Reporting

RTI's QMP and QAPP have been approved by the EPA for use in the North Carolina WIIN program to test drinking water for lead in childcare centers and schools. The work plans in these quality documents detail the information required in the quarterly and annual reports.

Additionally, an excerpt from the recent RTI NC WIIN grant quarterly report is included in **Exhibit B1** in **Appendix B** of this proposal, and an example of an annual report is included in **Exhibit B2**. These reports provide the activities accomplished in a period of time (e.g., quarterly or annually).

Ensuring Data Quality

RTI staff follow rigorous QA and QC steps based on approved QAPPs, sampling plans, QMPs, and SOPs. We will prepare a QAPP and QMP for this program and ensure that the documents are approved by West Virginia OEHS and EPA before work commences. All RTI-generated data will follow our QA procedures as specified in an EPA-approved QAPP. RTI's QA process ensures that the data entry error rate is minimal (below 2%). Uploaded sample data will be linked based on their unique barcode sample identification (ID) to the Chain-of-Custody Form, the laboratory results, and the school's or childcare center's profile in the online portal. This linkage will trigger the submission of an automated email to the facility that RTI has received the samples.

3.6. Consultant shall have a minimum of 3 years' experience creating and maintaining a cloud-based software database, communication strategy for sample plan design, sample collections and conveying sample results.

RTI Response—Cloud-Based Software Database and Communication Plan

In 2017, we completed the Clean Water for Carolina Kids pilot study to characterize lead in drinking water and implement a citizen-scientist approach, which included the development of a cloud-based web platform for online enrollment and sample kit mail-out, tracking, and reporting to support lead testing and mitigation across North Carolina and nationwide. This system has been in operation since 2017, efficiently facilitating training, communication, testing, and taking action, with regular maintenance and improvements being made over the past 3 years. By pairing our piloted approach with a standardized online portal, we expanded our capacity while maintaining cost feasibility and scientific rigor.

Our approach avoids common pitfalls that can lead to costly and burdensome testing—or no testing—by

- Streamlining enrollment and reporting with www.cleanwaterforuskids.org (readily customizable for the State of West Virginia)
- Training center staff to conduct testing, thereby eliminating the need for costly professional onsite testing

- Reducing testing confusion by providing training videos and standardized sample kits with return shipping labels to RTI’s West Virginia Office of Laboratory Services—certified, independent laboratory
- Redirecting fear and concern into simple, positive actions to mitigate problems
- Encouraging transparency with a publicly available results mapper
- Helping states prioritize concerns with built-in result notifications.

Our cross-disciplinary staff are uniquely experienced in community engagement and risk communication and have expertise in conducting laboratory analysis.

3.7. Consultant must have a minimum of 3 years working with an in house or external laboratory analyzing lead in drinking water using EPA Method 200.8.

RTI Response—Lead in Drinking Water Laboratory Analysis Experience

RTI staff have experience with analyzing lead in drinking water by using equipment approved in EPA Method 200.8 since 2016. To demonstrate ongoing analytical competence with EPA Method 200.8, RTI participates in semi-annual proficiency testing studies conducted by a National Environmental Laboratory Accreditation Conference (NELAC) authority.

RTI also understands the importance of “hands-on” laboratory training. Each RTI Chemist analyzing lead in drinking water by using equipment approved in EPA Method 200.8 must pass a demonstration of capability (DOC) procedure for each task that he or she is expected to perform. Passing this procedure documents that the Chemist can achieve acceptable precision and accuracy when performing a technique according to SOP-DW-100, Determination of Metals in Drinking Water Samples by Inductively Coupled Plasma–Mass Spectrometry.

To help citizen scientists to understand what is happening to their water samples in the laboratory, we created a video that provides an overview of a laboratory analysis of water samples (<https://www.youtube.com/watch?v=WdsgvxFcuVk&feature=youtu.be>, also available through our website at <https://www.cleanwaterforcarolinakids.org/howto>).

4. MANDATORY REQUIREMENTS

4.1. Mandatory Contract Services Requirements and Deliverables.

RTI Response—Contract Requirements

RTI meets all mandatory contract service requirements and will submit high-quality deliverables as specified in this solicitation. RTI will support the State of West Virginia’s program to test lead in the drinking water at its schools and childcare centers, collect data, and ensure good communication by leveraging our Clean Water for U.S. Kids website (www.cleanwaterforuskids.org) and the North Carolina portal (www.cleanwaterforcarolinakids.org), both of which are already fully developed and will be customized for the State of West Virginia. These sites will facilitate enrollment, citizen-scientist training, mail-out of sample kits, laboratory analysis tracking, results reporting, and overall communication and participation in the program. Additional information about how we will meet all requirements and deliverables is documented throughout our proposal.

4.1.1 Provide a cloud-based platform.

RTI Response—Cloud-Based Portal

Following a potential contract award, we will leverage our established portal for the United States and our experience with the North Carolina WIIN grant for the State of West Virginia. We will refine our training materials for use in West Virginia. We can set up our cloud-based portal for West Virginia rapidly because we have already developed and tested—and currently use—an operational cloud-based web platform that is easily transferable to meet West Virginia OEHS’s technical and timeline needs, as shown in **Exhibit A4**.

4.1.1.1 Ability to relate/manage multiple schools/childcare facilities in one account.

RTI Response—Capacity to Manage Multiple Schools and Centers

We will use our online portal (www.cleanwaterforuskids.org) for enrollment in the State of West Virginia. This web-based interface is publicly available with access instructions that can be easily communicated to a list of known schools and childcare centers or distributed by West Virginia OEHS. If we are provided with a list of schools and childcare centers, then we will add them to our portal to facilitate enrollment. A representative from a school or childcare center can then begin the enrollment procedure through the process outlined in Sections 4.1.1.2 through 4.1.1.17 of this proposal (and presented in a video on our website (<https://www.youtube.com/watch?v=EiWUYPoNCSM&feature=youtu.be> and also available at <https://www.cleanwaterforcarolinakids.org/howto>):

- The participant logs on to the enrollment module with a provided PIN and selects their school or childcare center from a known master list.
- If their school or childcare center is not shown in the list or is newly built, then a facility can be added to the portal, which can be verified with West Virginia OEHS following enrollment submission.
- The participant confirms school or childcare center information, including name, address, and contact information. Additionally, they are prompted to create a set of authorized credentials that will later be used to access testing results.
- If another user attempts to select the center or school after credential creation, a contact form will be shown to gather more information.
- The enrollment system has the ability to manage multiple schools or childcare centers under one account. This is currently being employed with the North Carolina WIIN program.
- Enrollment steps are presented to the participant, allowing them to easily define the number and location of taps inside their school or center while also providing any additional required document uploads, including pictures of taps. The authorized representative can complete the enrollment workflow over multiple sessions, if desired.
- When enrollment steps are completed, the information is automatically transferred to the logistics and laboratory integration module. A confirmation email is sent to the email address for the participant indicating they have successfully enrolled in the testing program.

4.1.1.2 User permissions layers to support different users at the state, district/franchise, and school/childcare level.

RTI Response—User Permissions

Our online platform employs a role-based authentication scheme against a known store of database usernames and passwords that limits or enhances access to users based on their involvement. Specifically:

- For school or childcare center enrollees, access is limited to the individual facility or set of facilities enrolled
- West Virginia OEHS–authorized users will have access to the entire database
- The public will have access to the WIIN-required aggregated GIS mapper that removes school descriptive survey information.

All passwords are stored in an encrypted database and processed through a hashing and salting process. Role-based authentication in the software dictates which modules and features of the application are available to each particular user. All roles will be fully specified and checked through a least-privileged authorization process. Additionally, all data in transit and at rest in the system are secured via industry-standard encryption practices.

4.1.1.3 Ability to create/manage water sample plans based on 3T’s best practices.

RTI Response—Water Sample Plans

The online enrollment process walks the enrollee through each room in the school or childcare center with a drinking or cooking outlet and prompts the user to name each outlet, thus developing a water sampling plan profile. The walkthrough includes identification of water fountains, outdoor taps, and other drinking water taps throughout the facility. This process is used to create a pre-filled Chain-of-Custody Form to include in the sample kit, as shown in **Exhibits A5** and **A6**. After enrollment, facility administrators are directed to view informational videos and read the training instructions to become citizen scientists.

The survey guides enrollees through the facility locations with water outlets in the following order: kitchens, water fountains, gymnasiums, outside, classrooms, and other rooms. RTI will use the information in this brief survey to build the sample kit to send the school or childcare center that contains the appropriate number of bottles for its taps. RTI will also prepare the Chain-of-Custody Forms that will be included with the sample bottles.

4.1.1.4 Ability to capture fixture level data useful for remediation decision making.

RTI Response—Fixture Data and Remediation Decision Making

We will use data from our online portal to generate facility and fixture-specific reports, which can also be used to track the schools or childcare centers that have lead concentrations at or above 15 ppb. Schools with samples containing lead at or above 15 ppb will also receive a special notification email that confirmatory sampling should be conducted for the specified tap or taps, with West Virginia OEHS points of contact copied, if they so desire.

A complete tracking report can be generated for each school or childcare center that documents the dates and times when each step of the registration, analysis, and reporting process occurred.

The report will summarize the results for each school and childcare center, including those that prompted the elevated lead notification and the need for additional sampling. An example report is shown in **Exhibit A7**.

The data collection and school or childcare facility tracking on the online portal can also be used by West Virginia OEHS stakeholders to view lead mitigation actions that the school or childcare center enters for a specific fixture or fixtures, along with confirmatory, 30-second flush samples used to confirm high lead levels and effectiveness of mitigation (see **Exhibit A8**).

A school-specific laboratory report will include documentation of sampling by the school or childcare center that the facility may publicly share for notice of performance and, as well as an online public results mapper that provides the public with notice of the fixtures that were tested and the corresponding results.

4.1.1.5 Ability to upload photos of fixtures or outlets.

RTI Response—Photo Uploading

The West Virginia OEHS will benefit from RTI’s already-developed portal because it can be readily customized to allow for the uploading of fixture or outlet-specific photographs or other attachments (e.g., remediation actions, if appropriate).

4.1.1.6 Sample kit/collection tracking.

RTI Response—Sample Collection Tracking

RTI has extensive experience with preparing and shipping test kits in support of water testing. For example, we have already enrolled approximately 2,000 childcare centers and processed approximately 7,500 drinking water samples across North Carolina for the North Carolina WIIN grant. We will provide complete sampling kits (including bottles, instructions, and return postage) for drinking water samples to analyze lead in 250-milliliter (mL) bottles following guidelines set forth in EPA’s 3Ts Manual.

Sample kits will be standardized across schools and childcare centers, with each facility receiving its requested number of bottles, a Chain-of-Custody Form, and instructions on how to conduct first draw sampling. Samples will have pre-assigned, identifiable, unique ID numbers linked by barcode to the enrollment responses to populate the Chain-of-Custody Form. Kits will include a 250-mL pre-labeled sample bottle(s) with barcoded sample ID and a bottle for each tap identified in the enrollment survey, Chain-of-Custody Form to maintain sample integrity and tracking, written instructions on how to collect and ship samples, and a return label (see **Exhibit A9a-d**).

4.1.1.7 Remediation tracking.

RTI Response—Remediation Tracking

In addition to tracking initial sample kits requested and completed, our online portal allows for tracking the kits for confirmation sampling, and it flags these kits as different from initial sample kits. Centers can also list their remediation efforts and if they completed remediation, they can request a remediation sample to confirm results (see **Exhibit A8**).

4.1.1.8 Custom fields to track any additional metrics about school/childcare participants valuable to the state.

RTI Response—Customized Tracking

We will customize our currently operational cloud-based portal to facilitate school enrollment, citizen-scientist training, mail-out of sample kits, laboratory analysis tracking, results reporting, overall communication and participation in the program, and additional metrics or fields requested by the State of West Virginia. Our current enrollment survey collects data on building age, water system, septic system, filter use, center enrollment, number of students receiving financial assistance, and student demographic information for prioritization according to the EPA WIIN requirements.

4.1.1.9 Ability to use cell phone/tablet in field to make sample plans and capture sample collection data.

RTI Response—Ability to Use Cell Phone or Tablet

The Clean Water for U.S. Kids portal is optimized to be run through a computer, cell phone, or tablet, thereby allowing centers to enroll, view results, list mitigation measures, or make changes to their enrollment wherever they are, as long as they have cell service or Internet and their preferred device. The West Virginia OEHS will directly benefit from RTI's approach of training citizen-scientists to collect samples and maintaining on-demand communication with facilities throughout the program. Included with the sample kits is written documentation on "how to sample" and a Chain-of-Custody Form for field tracking of samples and capturing comments, allowing the facility administrator who is performing the sampling to capture any changes in the field with minimal difficulty. Importantly, RTI staff will run a standardized customer service interface through Zendesk. The Zendesk interface facilitates telephone and email communication between RTI and school staff by using automatic, data-specific email notifications to route questions and comments to the staff most capable of answering them. This communication process ensures constant and timely interaction with the field.

4.1.1.10 Designate fixture status such as active, and associate samples.

RTI Response—Fixture Designations

During the enrollment process, the point of contact at the school or childcare center will answer a series of questions about their center's drinking water outlets. The current enrollment survey includes questions about each tap's location, use, and whether they use a filter. For the West Virginia portal, we can easily add a requirement for fixture image uploads and questions about designated use and status. Based on these answers, we will develop a sampling plan and a Chain-of-Custody Form that identifies each outlet in the enrollment survey. Each outlet will have a unique barcode sample ID, which will be on the sample bottle and the Chain-of-Custody Form for cross referencing.

4.1.1.11 Automatic notifications of completed sample plans and lab results for all software users.

RTI Response—Automatic Notifications

RTI's online portal has a comprehensive set of built-in notifications, including enrollment completion, samples on the way, sample kit arrival, sample reminder, and the results that are ready to view. Testing results will be presented in an easy-to-understand manner, and recommendations will be provided regarding follow-up actions, if needed (see **Exhibits A10 and A11**). The portal also hosts a mapper to display results publicly following WIIN guidelines. Our portal can also automatically notify West Virginia OEHS via email regarding schools with results at or above 15 ppb. We can also adapt our portal to provide additional notifications, as needed, to subsets of users or all users.

4.1.1.12 Sorting/filtering options on sample plan and results data.

RTI Response—Filtering Planning and Results Data

Our portal allows for all enrollment, tracking, and results data to be sorted and filtered in various ways. We will use data from the online repository to generate reports, which can be used to track the schools that have lead concentrations at or above 15 ppb. Schools with samples containing lead at or above 15 ppb will also receive a special notification email that additional sampling is required, with the West Virginia OEHS points of contact copied, if they so desire. A complete tracking report can be generated for each school or childcare center, documenting the dates and times when each step of the registration, analysis, and reporting process occurred. The report will summarize the results for each school and childcare center, including those that prompted the elevated lead notification and the need for additional sampling. We can readily prepare custom reports, as required, for West Virginia OEHS. All reported results and mitigation efforts are also reported on our public mapper and are searchable by center name, address, or county. We can also adapt, as needed, our portal to provide additional filtering and sorting options.

4.1.1.13 Downloadable reports related to sampling activity and results.

RTI Response—Downloadable Sampling and Results Reports

The West Virginia OEHS can use the program administration section of our online portal to view, download, and upload data and reports for all or for individual schools and childcare centers with initial results or following confirmatory, 30-second flush sampling results. Additionally, RTI's already established online portal tracks enrollments and the number of samples requested by each participant, divided into unprocessed enrollments, outbound shipments, inbound shipments, samples received and awaiting laboratory analysis, and samples analyzed.

4.1.1.14 Document libraries for all facilities.

RTI Response—Document Libraries

The West Virginia OEHS and its stakeholders will directly benefit from RTI's already-developed portal that documents all fixture locations, test results, and mitigation actions. We can readily customize our portal so other information (e.g., photographs) can be uploaded. This information is stored in a cloud-based format in our portal as a document library for all participating

facilities. We also house training documents and videos on our portal for use by all facilities. Additionally, personalized and standardized information can be downloaded when needed.

4.1.1.15 Internal-facing dashboards on sampling metrics.

RTI Response—Internal Sample Metrics Dashboard

The West Virginia OEHS will directly benefit from RTI’s already-operational online portal that includes internal-facing dashboards that can be readily customized for the State of West Virginia (see **Exhibits A12** and **A13**). The portal tracks enrollments and the number of samples requested by each participant, divided into unprocessed enrollments, outbound shipments, inbound shipments, samples received and awaiting laboratory analysis, and samples analyzed. In addition to tracking samples, the program administration section of our online portal can be used by West Virginia OEHS to view, download, and upload data from individual schools with initial results or following confirmatory, 30-second flush sampling results.

Using the www.cleanwaterforuskids.org portal for West Virginia, RTI and system administrators at the West Virginia OEHS can track schools that complete initial sampling in the program with the portal providing information about which schools have requested samples, which are pending, and which have not yet started the program. We can also design automated reports that can be emailed directly from the portal to report about the grant sampling progress and provide results reports and enrollment metrics.

4.1.1.16 Public-facing dashboards to facilitate results-sharing by participants with school/childcare stakeholders.

RTI Response—Public Results Dashboard

The West Virginia WIIN Program stakeholders will directly benefit from RTI’s public-facing dashboard and mapper that can be readily customized for the State of West Virginia. We will create a public GIS data mapper, similar to the one available at www.cleanwaterforcarolinakids.org/data, for the State of West Virginia. We will provide documentation of sampling by the school or childcare center in a facility-specific laboratory report that the school may publicly share for notice of performance, as well as an online public results mapper (<https://www.cleanwaterforuskids.org/data>) that provides the public with notice of the school outlets that were tested and the corresponding results (see **Exhibit A14**). Training materials that demonstrate how representatives from schools and childcare centers and members of the public can properly use these tools are available on our website at <https://www.cleanwaterforcarolinakids.org/howto> or on our program YouTube page at https://www.youtube.com/watch?v=jP1Lr_DWdqI&feature=youtu.be.

Laboratory reports may serve as a certification that testing was completed, with additional laboratory reports required for schools or childcare centers that have initial samples containing lead at or above 15 ppb.

4.1.1.17 Ability to access the software on an ongoing basis beyond the sampling program completion date.

RTI Response—Software Access

After sampling program completion, data may be accessed via the web-based Clean Water for U.S. Kids portal for up to 1 year following the conclusion of the program. At program completion, RTI will provide all data and archived web-based communications to the West Virginia OEHS through our readily exportable database, which is password-protected. Data can be provided via secure channel such as SFTP or encrypted email in a well-defined format such as CSV, XLS, or SQL per OEHS preference. The interface allows secure communication and coordination between users through the proper assignment of roles, groups, and permissions. Data can be extracted and analyzed in a variety of ways to evaluate project goals and meet applicable requirements. Access of the software for additional years past the year following project completion are subject to a license fee to cover the cost of maintenance and hosting the service.

RTI developed the Clean Water for U.S. Kids portal internally with private RTI funding and pursuant to Section 27 of the Federal Acquisition Regulations (FAR) and 48 Code of Federal Regulations (CFR) § 27.404-2. The Clean Water for U.S. Kids portal is classified as restricted computer software, restricting rights and any modifications thereof.

4.1.2 Communications.

RTI Response—Communications

We will use a variety of methods to communicate and maintain transparency throughout the program, with the goal of reaching target audiences. We will continuously conduct communication and outreach efforts for this program in collaboration with West Virginia OEHS. These efforts include approved program announcement emails sent to each licensed school and childcare center in the State of West Virginia, press releases are shared on social media and in parent, childcare, and school groups, networking and sharing of program information through other neighborhood and parent organizations. We have longstanding experience with communicating with various stakeholders in clear and practical ways, and we have a series of videos, webinars, and written information about lead testing already available and ready to adapt to West Virginia. A key component of the communication strategy will be a coordinated effort with the West Virginia OEHS to reach out to potential participants about the program. Additionally, we have a standardized communication platform available (<https://www.cleanwaterforcarolinakids.org/contact>) for anyone who has questions or comments that we will adapt for the State of West Virginia.

4.1.2.1 Consultant must provide assisting in developing a lead testing in drinking water strategy that supports training, monitoring and maintenance plan that protects children from lead exposure now and in the future.

RTI Response—Assistance in Developing Testing Strategy.

To support the successful development of a lead testing in drinking water strategy based on the 3Ts training, monitoring, and maintenance in the effort to protect children from early childhood exposure to lead now and in the future, RTI will work with the West Virginia OEHS to adapt our comprehensive training, monitoring, maintenance, and communication strategy for the West

Virginia Program. RTI will build a Clean Water for West Virginia Kids portal from our Clean Water for U.S. Kids portal (<https://www.cleanwaterforuskids.org/>), which is already live. The portal will provide key information about the State of West Virginia's lead sampling program to stakeholders and will give them access to resources to better understand the issues with lead in drinking water, how to use the portal, and how to manage high levels of lead in water. To share this and other information, we will establish key partnerships in the State of West Virginia from both the school and childcare sector, public health programs, and other interested organizations to support the program and transparently keep stakeholders informed of program progress and results.

Training. Through these partnerships and by directly sharing this information with each of the schools and childcare centers in the State of West Virginia, we will strive to educate school and childcare center staff about lead in drinking water, the sampling process, and potential remediation before the program begins and then again after obtaining the testing results and encourage them to share these resources with parents. Importantly, RTI will provide, at a minimum, the following items:

- Testing results will be shared as soon as possible with the childcare community through our functional online, web-based portal, but no later than 2 weeks after receiving the results
- Press releases and public meetings in collaboration with the West Virginia OEHS and school and childcare center leaders, as applicable, at least once a year
- Ongoing public education and updates to the website.

We will provide webinars, training sessions, and additional support for program participants. Our training strategies are further discussed in Section 4.1.4.

Monitoring. Our monitoring/testing strategy utilizes our RTI West Virginia-certified laboratory as discussed in Section 4.1.3.

Additionally, we will support remediation and maintenance measures by following the West Virginia OEHS guidelines and will recommend sustainable no-cost and low-cost solutions to keep lead out of water in the event that no corrective measures are required because the lead levels are below the 15 ppb EPA 3Ts recommended limit.

Maintenance. RTI houses all technical and web development resources and professionals on site to provide support, development, and customization of the web portal and data management system as needed for the State of West Virginia. The system that we developed boasts of rigorous cybersecurity functions and confidentiality to protect the privacy of program participants. Furthermore, because RTI hosts the system, it interfaces directly with our laboratory systems, thereby allowing for seamless import of analytical data for review and processing.

Our testing strategy has been cited as protecting more than 230,000 children in the State of North Carolina from lead in drinking water (<https://ncchild.org/clean-water-for-kids/>).

4.1.2.2 Consultant must establish a communication plan for presenting result, findings and mitigations when recommended.

RTI Response—Communication Plan

RTI’s online portal significantly streamlines communication, including testing results, which will be shared with school and childcare communities no later than 2 weeks after receiving the results. Once we complete QA and QC of the laboratory results, RTI will upload the information into the portal; this action will immediately notify the school or childcare center that their results are available. RTI’s online results mapper also immediately posts results for stakeholders or the public to view. We have developed videos that explain this process to help centers understand their results.

RTI will create local partnerships between the childcare and school communities, along with associated stakeholders. In collaboration with the West Virginia OEHS, we will create and disseminate press releases, letters and fliers, newsletters, presentations, YouTube how-to videos, social media posts, and, most importantly, an online enrollment portal with notification emails sent to all eligible schools in the State of West Virginia. To meet EPA WIIN program requirements, schools and childcare centers can use the results document that we provide and the results on the public mapper to share in their administrative offices or on their public website (if applicable).

4.1.2.3 Consultant must provide educational materials on lead sampling and remediation.

RTI Response—Educational Materials

The West Virginia OEHS will directly benefit from RTI’s already established plan for educating all participants about lead based on the levels found in drinking water. RTI has already developed informational videos and pamphlets that explain action steps in easy-to-understand language so school and childcare centers can address lead in their taps by using low- and no-cost solutions in many cases, as shown in **Exhibits A15** and **A16**. For part of this grant, we will optimize the materials for use in the State of West Virginia. We will provide educational materials to all participating schools and childcare centers so they can consider incorporating the information into routine maintenance activities, regardless of their sample results. Some of the information includes practicing “no-cost clean water habits” such as the following:

- Keep it cold: Use only cold water for drinking, cooking, or preparing infant formula, even when boiling water.
- Clean the faucet: Regularly remove and rinse loose debris from faucet strainers and aerators.
- Empower parents, staff, and students: Communicate the facility’s findings and clean water actions to parents, staff members, and children.
- Designate taps to be used for drinking and cooking.
- Place designated use signs for children and staff to understand which taps are for consumption or other purposes (e.g., utility sinks or handwashing).

4.1.2.4 Consultant must provide technical support (phone/email) to school staff on questions related to lead sampling & remediation.

RTI Response—Technical Support Via Phone/Email

We have an established process to facilitate communication between RTI, the West Virginia OEHS, and school or childcare center staff by using automatic, data-specific email notifications for each step; a help desk (run by RTI project staff using the Zendesk interface) to route questions and comments to the appropriate people; and regular direct personal communication channels (e.g., telephone, email, webinar). In addition to our contact information, RTI’s Zendesk portal provides timely technical assistance to schools and childcare centers that are experiencing any difficulties (e.g., registering, portal use, sampling, understanding sampling results). RTI staff who manage the portal are members of the RTI key personnel supporting this proposed effort, so suggestions, frequently asked questions, and common comments about the enrollment process, sampling protocol, or web portal are regularly updated and addressed (see **Exhibit A17**).

4.1.2.5 Consultant must provide project management support to schools, keeping them accountable for completing sample designs, taking samples, returning kits, and sharing results with the school and community.

RTI Response—Project Management Support

RTI will support the State of West Virginia’s schools and childcare communities in their efforts to complete drinking water testing for lead by providing project management support that spans from the sample design stage to sample collection, sample kit shipment, and results dissemination. Leveraging our Clean Water for U.S. Kids website, we will walk schools and childcare centers through an enrollment survey, which will automatically complete a sample design for their facility, provide them with sample kits and sampling instructions, regular reminders to sample and return kits, an easy-to-understand results page and a public mapper link for sharing results, and the ability to list their remediation activities after samples have been collected. The RTI online portal is already operational and has been used to facilitate school and center enrollment, citizen-scientist training, sample kit mail-out, laboratory analysis tracking, results reporting, and overall program communication for the State of North Carolina. If RTI is selected for contract award, then we will optimize this portal for the State of West Virginia with specific EPA 3Ts guidance and recommendations.

4.1.3 Laboratory testing and test kits.

RTI Response—Laboratory Testing and Sample Kits

RTI’s integrated platform incorporates recruitment, enrollment, training (enrollment, sampling, results reporting, and mitigation), software and database development and hosting, laboratory analysis, and results reporting and visualization—all elements in one location. We further discuss our testing and test kits below.

4.1.3.1 Consultant must provide sample kits including bottles, instructions, chain of custody and return postage to selected facilities.

RTI Response—Sample Kit Materials

RTI has extensive experience with preparing and shipping test kits in support of water testing. For example, we have already enrolled approximately 2,000 childcare centers and processed

approximately 7,500 drinking water samples across the State of North Carolina for the North Carolina WIIN grant. We will provide complete sampling kits (including bottles, instructions, Chain-of-Custody Form, and return postage) for all identified drinking water samples to analyze lead in 250-mL bottles following guidelines set forth in EPA’s 3Ts Manual. An example of a Chain-of-Custody Form is shown in **Exhibit A18**.

4.1.3.2 Consultant must provide sample kits with pre-labeled bottles to corresponding facilities and fixtures, enabling operators to collect sample kits.

RTI Response—Pre-Labeled Bottles

Each sample kit will include a 250-mL bottle for each drinking water outlet identified in the enrollment survey. Pre-labeled sample bottles with barcoded sample ID will be accompanied by a Chain-of-Custody Form to maintain sample integrity and tracking, written instructions on how to collect and ship samples, and a return label. **Exhibits A9a-d** and **A18** show examples of sample kit contents, United Parcel Service of America (UPS) tracking information, and Chain-of-Custody Form generation.

4.1.3.3 Consultant must coordinate between facilities and certified labs to resolve issues, i.e., undeliverable kits, chain of custody errors, missing sample data, leaking bottles, etc.

RTI Response—Facility and Laboratory Coordination

The West Virginia OEHS will directly benefit from RTI’s “one-stop shop” to handle all statewide aspects of this proposed program that include laboratory science, environmental health risk communication, information technology, logistics, and technical training. Once RTI receives the sample kit, we will verify sample integrity and completion of Chain-of-Custody Form. Program QA staff at RTI will flag any issues and will address any issues with undeliverable kits, Chain-of-Custody Form errors, missing sample data, or leaking bottles with schools and childcare centers. Once sample login and verification have been completed, the Laboratory Manager at RTI will assign samples for preparation and analysis in RTI’s West Virginia Office of Laboratory Services—certified laboratory. We will store samples in a secure location at room temperature following acidification.

Because RTI will conduct both laboratory and program coordination, any communication with schools and childcare centers will come directly from the RTI staff involved in the project, thereby allowing for seamless flow of information and faster resolution of any issues.

4.1.3.4 Consultant must provide training and educating on the risks of lead in drinking water and testing for lead to the community of surrounding residential area that is impacted by testing, as well as key partnerships to support the program.

RTI Response—Training and Education on Lead Risks

We have demonstrated the value and success of having study participants play an active role in sampling. For the State of West Virginia, we will use our EPA 3Ts–based educational and training materials to train and educate program stakeholders. We will schedule planned webinars to introduce schools and childcare centers, parents, teachers, and staff to the program as often as needed. We will also post resources and materials online that have been reviewed and approved by the West Virginia OEHS for access by the public. Training will include the causes and health effects of lead in drinking water and program planning and sampling procedures.

Our ability to create and engage key local partners in the program was the cornerstone for the implementation of North Carolina’s WIIN grant. We will bring the same collaborative desire and experience in creating successful partnerships to the State of West Virginia to ensure widespread program enrollment and participation.

4.1.3.5 Provide water sampling kits that include: 250mL wide mouth unacidified sample bottles, bottle labels according to sample plan, sample collection guidance, on call/email support for kits.

RTI Response—Water Bottles and Sample Kit Support

Each sample kit will include a wide mouth, unacidified 250-mL bottle for each drinking water outlet identified in the enrollment survey. We will provide the pre-labeled sample bottles with barcoded sample ID and a Chain-of-Custody Form to maintain sample integrity and tracking, written instructions on how to collect and ship samples, and a return label.

Once the sample kit has been assembled, each school and childcare center will receive an email notifying them that their kit has been shipped. Sample kits will be shipped by 2-day priority mail. The kit package will also include sampling instructions and a document that discusses some common pitfalls to avoid. We will also provide an email that includes a link to videos to help with first-draw sampling and shipping.

Once RTI receives the sample kit from the facility administrators, we will verify sample integrity and completion of the Chain-of-Custody Form. Once sample login and verification have been completed, the Laboratory Manager will assign samples for preparation and analysis. We will store samples in a secure location at room temperature following acidification.

Throughout the program, our customer support system, operated through RTI’s Zendesk portal will be available to provide telephone and email support. Additionally, our frequently asked questions document (<https://www.cleanwaterforcarolinakids.org/faq>) and YouTube channel ([Clean Water for US Kids - YouTube](#)) will be updated for the State of West Virginia to provide a quick resource for schools and childcare centers as questions are posted.

4.1.3.6 Provide electronic Chain of Custody and maintain data.

RTI Response—Chain of Custody

Sample kits will be standardized across schools and childcare centers, with each facility receiving its requested number of bottles, a Chain-of-Custody Form, and instructions to conduct first draw sampling. Samples will have pre-assigned, identifiable, unique ID numbers linked by barcode to the enrollment responses to populate the Chain-of-Custody Form (see **Exhibit A18**). Sample kits will include a 250-mL bottle for each tap identified in the enrollment survey.

4.1.4 Training.

RTI Response—Training

Our program focuses on training school and childcare center administrators or staff as citizen scientists to complete the sampling following EPA’s 3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities. RTI has developed training videos and written documentation (in English and Spanish) to enable school administrators or facility staff to conduct sampling. We can train staff to collect drinking water samples based on our tested protocols already in use at childcare centers and schools throughout the State of West Virginia

and to ship the samples and documentation back to RTI by using a prepaid shipping label from UPS. We can also provide schools and childcare centers with personalized telephone and email support for questions or comments.

We will include education and training about the risks of lead in drinking water, testing for lead, and EPA's 3Ts guidance for mitigation to the community or surrounding residential area that is impacted by testing, as well as key partnerships to support the program. We will also post resources and materials on our website for access by the public. Training will include the causes and health effects of lead in drinking water and training about program plan and sampling procedures. An example of an RTI-developed training material that is currently in use is available at <https://www.rti.org/brochures/clean-water-carolina-kids-information-lead-drinking-water>.

We will work to reach stakeholders, perform laboratory analytical services, and disseminate results and information and will be developing key partnerships to support the program.

We will use a workflow-based framework to manage normal operations through the duration of testing. We created this set of web-based tools with operational efficiency in mind while demonstrating high-levels of QC and security.

4.1.4.1 Consultant must provide training and educating on the risks of lead in drinking water and testing for lead to the community of surrounding residential area that is impacted by testing, as well as key partnerships to support the program.

RTI Response—Training and Education on Lead Risks

Our program focuses on training schools and childcare center administrators or staff as citizen-scientists to complete sampling following EPA's 3Ts. This approach addresses the logistical challenges associated with having professionals collect on-site samples (especially during the COVID-19 pandemic) and allows RTI to conduct analyses efficiently. West Virginia schools and childcare center administrators will be empowered to test for lead in water.

The State of West Virginia will directly benefit from RTI's already developed training videos and written documentation (in English and Spanish) to enable childcare center administrators or staff to conduct EPA 3Ts approved sampling. We will train staff on how to collect drinking water samples based on our tested protocols, which are already in use at schools and childcare centers throughout the State of North Carolina, and to ship samples and documentation back to RTI by using a prepaid shipping label. We also provide centers with personalized web and telephone support for questions or comments. **Exhibit A15** is an example of our education material and **Exhibit A16** are sample screenshots of our training videos.

As part of this grant, RTI will provide education and training materials about the risks of lead in drinking water, testing for lead, and EPA's 3Ts guidance for mitigation through enrollment on the website and to West Virginia OEHS to share with the communities that will be impacted by testing and with key stakeholders who support the program. We will adapt and share the resources and materials currently on our website for access by the public in the State of West Virginia. Training includes the causes and health effects of lead in drinking water and focuses on the program plan and sampling procedures. RTI has developed and can readily adapt educational materials to provide initial and ongoing information to participants, schools, childcare centers, parents, and the West Virginia OEHS.

4.1.4.2 Consultant must create and hosting live/recorded webinars for the school staff on program requirements, enrollment, sample planning, sample collection, remediation and communicating with the public.

RTI Response—Live and Recorded Webinars

We will train staff at schools and childcare centers on how to properly collect samples according to EPA 3Ts protocols and how to correctly fill out the forms and records that come with the samples. We will use our existing and tested online enrollment and reporting platform to create the sampling documents and order the sample kit. As we have for the State of North Carolina, we will provide and record several webinars to facilitate recruitment, enrollment, sample planning, sample collection, remediation, and education to encourage participation in the program. These webinars will be continuously available.

To help engage staff at schools and childcare centers or to further their involvement in this program, we will include informational videos that show how to collect samples; how to fill out the associated forms and send samples to the laboratory; what happens at the laboratory; how to understand the results, choose the appropriate filters, install and maintain a filter, and replace a faucet fixture; and why sampling is important. We also provide written training instructions. RTI will use these training videos and writeups, updating them as needed, to match the State of West Virginia's sampling and laboratory protocols.

We will ensure that recorded webinars and training videos are available on our webpage. Some examples of current training videos for our North Carolina WIIN grant program are available at <https://www.cleanwaterforcarolinakids.org/howto> and on our program YouTube page at <https://www.youtube.com/channel/UCfCzSONTKPlzXJ8brM9VOQw>. A recently recorded webinar is currently available as an example of what can be provided for the State of West Virginia (see <https://youtu.be/Yidx8YzJAaI>).

4.1.4.3 Consultant must provide training and implementation to agency and facility staff on software use.

RTI Response—Training and Implementation on Software Use for Staff

We will provide training to agency and facility staff on how to use our software in various formats. We will ensure that the online portal is publicly available, with access instructions unique to the State of West Virginia. We will send the URL and unique personal identification number (PIN) to qualified schools and childcare centers and will provide the corresponding training videos (see <https://www.youtube.com/watch?v=EiWUYYPoNCSM&feature=youtu.be>). This information will be communicated to a master-list of known centers. A school or childcare center can enroll in the program through the following process:

- A participant logs on to the enrollment module and selects the school or childcare center from the dropdown list (see an example in **Exhibit A19**). If that facility is not shown or has been recently built, then it can be added and flagged for West Virginia OEHS's verification and approval.
- A participant confirms facility information (e.g., name, address, contact information) and is prompted to create a set of authorized credentials (i.e., username and password) that will later be used to access testing results. If another user attempts to select the facility after credential creation, then a contact form will collect more information.

- Enrollment steps are presented to the participant in a series of questions that generate a sampling plan based on the participant’s answers. The sampling plan is included in the sampling kit, along with documentation about sampling procedures. The school or childcare center representative can complete enrollment over multiple sessions, if desired.
- When enrollment is completed, information is automatically transferred to the logistics and laboratory integration module. A confirmation email is sent to the participant that indicates the participant has successfully enrolled.

A back-up process is also available if a school or childcare center requests a printed enrollment form. We have already-developed training materials in place that include pamphlets and recorded training videos detailing the enrollment process, showing schools and childcare centers how to view results, and listing mitigation efforts. We will develop and share additional videos detailing the process for uploading pictures of taps and remediations and other software as needed.

4.1.5 Taking Action.

RTI Response—Taking Action

We have established a plan for responding to results when testing has revealed potential elevated lead. RTI has developed informational videos and pamphlets explaining these action steps in easy-to-understand language so school and childcare center administrators can handle the issue of lead in their tap by using low- and no-cost solutions in many cases. As part of the grant process, these materials will be adapted and optimized for the State of West Virginia.

We will encourage all schools and childcare centers to practice no-cost clean water habits, including using cold water for food preparation—even when the water will be boiled; addressing clogs right away; and flushing water before use—especially after weekends and holidays. Because no level of lead is safe for children and because EPA has set a goal for lead in drinking water of zero, RTI has also developed low-cost recommendation materials for schools and childcare centers with detectible lead levels, especially those at or above EPA’s guideline of 15 ppb treatment-based action level for lead and copper.

Remediation recommendations include replacing old faucets with non-brass or non-chrome ones, installing and maintaining NSF-certified water filters on the tap, or installing and maintaining water fountains with NSF certified water filters. The 3Ts initiative includes action at sample sites with results at or above the hazard level (which currently is 15 ppb—the action level in EPA’s guideline for lead and copper). An example of a “taking action” flyer is available at <https://www.rti.org/brochures/water-filters-certified-remove-lead-drinking-water-and-cooking-water-clean-water-carolina>.

4.1.5.1 Knowledge and expertise on premise plumbing design and lead reduction strategies. Ability to provide technical assistance to school/childcare participants on implementing remediation strategies.

RTI Response—Plumbing Design and Lead Reduction Expertise

Our staff are experts on drinking water quality, specifically lead in drinking water, from identification to mitigation. The proposed program team has received several awards for their efforts to-date. For more information about our proposed team, see **Exhibit A2**. RTI’s online

enrollment survey collects information about the facility’s plumbing design when a school or childcare center enrolls in the program. The online portal will automatically notify schools and childcare centers when results are available. Testing results are presented in an easy-to-understand manner and will provide recommendations about follow-up actions, if needed. The portal also hosts a mapper to display results publicly and according to WIIN guidelines. Our portal will automatically notify the West Virginia OEHS via email regarding centers with results at or above the 15-ppb EPA 3Ts threshold and will include strongly recommend remediation activities.

RTI has already developed informational videos and pamphlets that explain potential actions, if necessary, in easy-to-understand language so schools and childcare centers can mitigate lead in their taps, in many cases by using low- and no-cost solutions. For part of the grant process, we will adapt these materials and optimize them for the State of West Virginia. We will encourage all schools and childcare centers to practice no-cost clean water habits, including using cold water for food preparation—even when the water will be boiled; addressing clogs right away; and flushing water before use—especially after weekends and holidays.

4.1.5.2 Ability to capture discrete remediation actions taken by participating facilities and to report those back to the state.

RTI Response—Capture Remediation Actions Taken

Our online portal asks schools and childcare centers to list any remediation methods they take after their sample results have been viewed. These data are then displayed in the EPA WIIN–required public mapper and will be shared with the state when remediations are listed. We have recorded training materials to show the public how to view results and remediation efforts at <https://www.cleanwaterforcarolinakids.org/howto> that can be adapted for West Virginia.

5. CONTRACT AWARD

5.1. Contract Award.

RTI understands that the contract will be awarded to the vendor that provides the Contract Services meeting the required specifications for the lowest overall total cost. We believe that our combined technical expertise, experience, and cost are best positioned for the required specifications of the West Virginia OEHS.

5.2. Pricing Page.

RTI has completed the Pricing Page in full and has included it as an attachment upload in wvOASIS.

6. PERFORMANCE

RTI agrees to coordinate with the West Virginia OEHS on a schedule of performance of contract services and contract deliverables.

7. PAYMENT

RTI proposes to perform services pursuant to a Fixed Price contract, with net payment terms of 30 days upon receipt of invoice. RTI is open to negotiation of payment, and RTI agrees to accept payment in accordance with the payment procedures of the State of West Virginia.

8. TRAVEL

Our proposed plan is innovative, effective, and—most importantly for the State of West Virginia—scalable and transferable. We are well positioned to transfer our approach for lead testing and mitigation efforts in North Carolina to a new partnership tailored for the State of West Virginia for two reasons. First, because our technical approach primarily uses an online portal and mails out sample kits, our work can be completed outside of the State of West Virginia and during COVID-19 travel restrictions (and associated uncertainty) without pause (as long as schools and childcare facilities are operating). Second, our nonprofit status includes government rates for shipping, so our overnight or 1-day shipping costs are similar to in-state costs. By conducting the program remotely, we save on travel expenses and dedicate more time to training and voluntarily enrolling more schools and childcare centers in the State of West Virginia.

9. FACILITIES ACCESS

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

Because our technical approach uses an online portal and mails out sample kits, we do not plan to have RTI staff access facilities, thereby reducing cost and uncertainty, especially during the ongoing COVID-19 pandemic.

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.

This item is not applicable because controlling cards and keys will not be requested.

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

This item is not applicable because controlling cards and keys will not be requested.

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

Although we do not envision requesting access to schools and childcare centers because of our proposed citizen-scientist sampling approach, RTI and proposed staff are accustomed to agency-specific security protocols, background checks, and procedures and will fully comply with any protocols pursuant to directive by any agency of the State of West Virginia.

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

Although we do not envision requesting access to schools and childcare centers because of our proposed citizen-scientist sampling approach, RTI and proposed staff are accustomed to agency-specific security protocols, background checks, and procedures and will fully comply with any protocols pursuant to directive by any agency of the State of West Virginia.

Appendix A: RTI Referenced Exhibits

Exhibit A1. Key personnel with lines of communication.

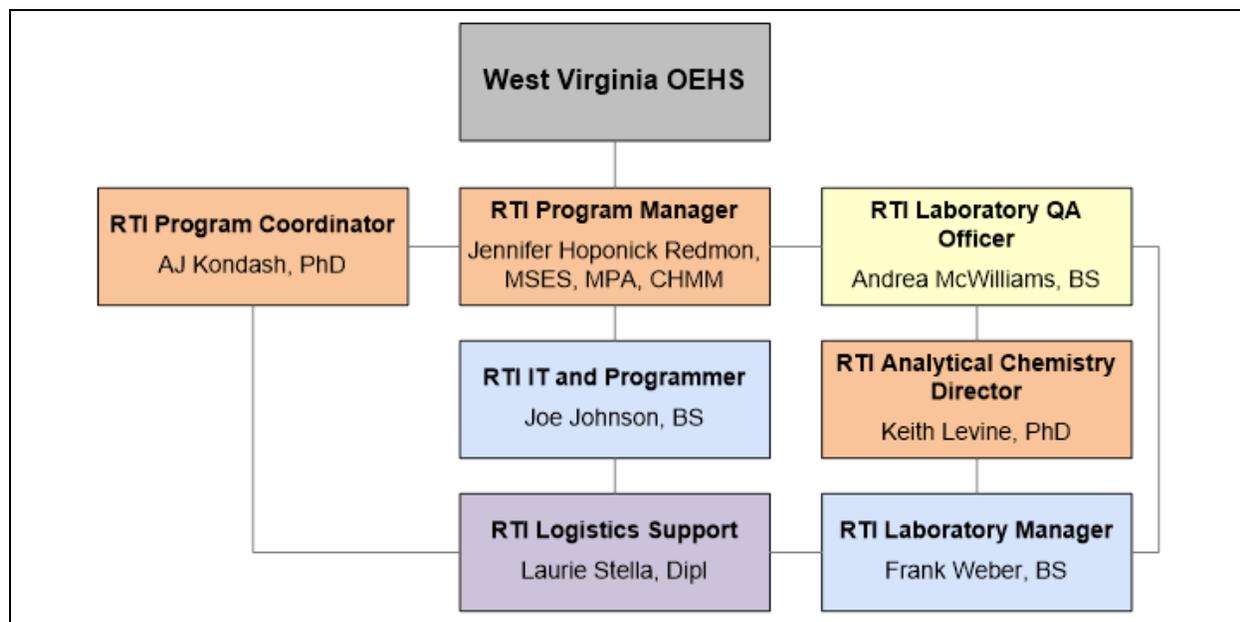


Exhibit A2. Key personnel positions and responsibilities (resumes for these staff are available upon request).

Position	Responsibilities
Program Manager Jennifer Haponick Redmon , MSES, MPA, CHMM, Senior Environmental Health Scientist and Chemical Risk Assessment Specialist	<p>Responsibility: Will serve as the primary line of communication between RTI and the State of West Virginia and overall manager for RTI staff efforts. Will ensure that project deliverables, timelines, budgets, and requirements are met and will oversee and finalize all program staff and technical work documents.</p> <p>Current projects: Serves as key personnel, Manager, or Principal Investigator (PI) on several projects, including Program Manager for North Carolina WIIN, Co-PI for EPA's Office of Research and Development (ORD) Per- and Polyfluoroalkyl Substances (PFAS) Private Well Water Grant, Technical Expert on the Center for Disease Control and Prevention's (CDC's) PFAS Multi-Site Study Grants, and Task Order Leader for EPA's Resource Conservation and Recovery Act (RCRA) Reviews (approximately 50% commitment across projects).</p>
Program Coordinator A.J. Kondash , Ph.D., Research Environmental Scientist	<p>Responsibility: Will provide key day-to-day support to coordinate work efforts among the program team; prepare sample analysis reports, paperwork tracking reports, sample kits report, and ad hoc reports; help the Program Manager ensure that the program is operating in a timely and accurate manner.</p> <p>Current projects: Serves as key personnel on several projects, including as Program Coordinator for the North Carolina WIIN project and as the Technical Lead on other environmental health- and chemistry-based projects (approximately 55% commitment across projects).</p>
Analytical Chemistry Director Keith Levine , Ph.D., Senior Director, Analytical Sciences	<p>Responsibility: Will ensure laboratory function by coordinating with the Laboratory Manager and Program Managers.</p> <p>Current projects: Serves as key personnel on several projects, most notably analytical chemistry support for the National Toxicology Program (approximately 30% commitment across projects) and administrative leadership of a team of 50 professional laboratory scientists (approximately 40% commitment).</p>

(continued)

Exhibit A2. Key personnel positions and responsibilities (resumes for these staff are available upon request). (Continued)

Position	Responsibilities
QA Officer Andrea McWilliams , B.S., Research Chemist	Responsibility: Will monitor all aspects of QA and QC, including data coming to RTI from schools, laboratory analysis, and online enrollment and reporting. Current projects: Serves as key personnel, including QA and QC function, on the North Carolina WIIN project and several large and ongoing proficiency testing programs (approximately 50% commitment across projects) and general facilities quality support (approximately 10% commitment).
Laboratory Manager Frank Weber , B.S., Manager, Inorganic Chemistry	Responsibility: Will oversee all laboratory activities and Chemists who perform technical tasks regarding sample custody, laboratory analysis, and initial data review. Current projects: Serves as PI on several ongoing commercial projects (approximately 40% commitment), including projects subject to quality compliance requirements by regulation or contractual directive. As Manager of RTI's inorganic laboratories, ensures that instruments and facilities are operating as intended (approximately 20% commitment).
Lead Software Engineer Joe Johnson , B.S., Research Software Engineer	Responsibility: Will ensure functionality of the State of West Virginia web portal, including adapting and maintaining it. Current projects: Serves as key personnel on Clean Water for Carolina Kids (approximately 20%), Nu-PathNET Emergency Response SaaS (approximately 20%), the National Institutes of Health (NIH) Technology Commercialization Tracker SaaS (approximately 20%), and other projects (approximately 15%) (75% current commitment).
Logistics Support Laurie Stella , High School Diploma, Administrative Supervisor	Responsibility: Will perform administrative tasks to support the project, along with coordination, preparation, and shipment of sample kits to schools; will oversee sample handling and custody technicians who perform sample kit preparation and shipment, as well as return shipment. Current projects: Provides logistics support for several large and ongoing proficiency testing programs (approximately 30% commitment) and administrative support for team of 50 analytical scientists (approximately 30% commitment).

Exhibit A3. Three recent projects and associated contact information for administering a lead testing in drinking water program.

Project 1: Clean Water for Carolina Kids—NC WIIN Grant	
Contracting activity	North Carolina Childhood Lead Poisoning Prevention Program
Contract number	01D01720
Contract title	EPA's WIIN grant
Contractor status	Contractor
Program contact	Ed Norman
Telephone	(919) 707-5951
Email	ed.norman@dhhs.nc.gov
<p>Description of project: RTI is contracted by the North Carolina DHHS to develop and implement the Clean Water for Carolina Kids Program to test for lead in drinking and cooking water at childcare centers and elementary schools with Head Start pre-kindergarten programs across the State of North Carolina. The work is funded by EPA's WIIN Act. RTI developed a partnership with the North Carolina DHHS, the North Carolina Child Advocacy Group, and the Duke Law and Policy Clinic in 2017, during the Clean Water for Carolina Kids study. The results of RTI's study showed that lead is in drinking and cooking water at childcare centers in North Carolina and that a citizen science–based testing protocol is feasible. This study, combined with the efforts of our partners, resulted in a statewide rule for lead testing and mitigation that was adopted in August 2019 and effective in October 2019. With the allocation of WIIN funding, RTI and the North Carolina DHHS have signed a contract to conduct sampling of lead in all childcare centers in the State of North Carolina by using the approach refined in the study that incorporates the use of citizen science and mail-out sample kits with an online cloud-based web portal for enrollment, sample kit ordering, tracking, and results reporting. The contract began April 1, 2020 and will continue as WIIN funds are allocated annually. The additional WIIN funding will expand testing to elementary schools without pre-kindergarten programs, along with middle and high schools.</p>	

Total contract amount	\$726,000 and \$532,000 add-on; \$964,000 total initial budget and \$554,000 add-on budget
Period of performance	May 1, 2020–September 2022 (or later)

Project 2: Early Childhood Exposure to Household Lead in Drinking Water—EPA STAR Grant	
Contracting activity	EPA Science to Achieve Results (STAR) grant
Contract number	839279
Contract title	EPA STAR grant
Contractor status	Contractor
Program contact	Dr. Jacqueline MacDonald Gibson
Telephone	(812) 856-2448
Email	jacmgibs@iu.edu
<p>Description of project: RTI is collaborating with Dr. Jacqueline MacDonald Gibson as part of a STAR grant project to measure lead in drinking water collected from private drinking wells. We coordinated logistics of sample collection, shipment, and tracking. RTI's analytical laboratories used EPA Method 200.8 to analyze lead and other metals in water samples by using inductively coupled plasma–mass spectrometry (ICP-MS). RTI analyzed 800 water samples and 300 children's blood samples collected in homes in peri-urban areas by using a sequential sampling method designed to differentiate between indoor and outdoor sources of lead. We will use the results to generate and validate a model for predicting lead contamination of private drinking wells, relate the contamination to lead exposure in children, and develop a behavioral intervention to minimize lead exposure from drinking water. RTI was responsible for sample collection logistics and training, inorganic laboratory analysis, project enrollment, and results dissemination. We worked with partners at the University of North Carolina at Chapel Hill to coordinate first draw sampling and shipment logistics for drinking water lead samples and train them on how to properly collect samples. We applied standard EPA methods for analysis of metals in drinking water, including sample preparation by digestion in a graphite heating block and analysis by ICP-MS, to measure lead and a suite of other metals. We reported results back to the project PI via a Microsoft Excel spreadsheet.</p>	
Total contract amount	\$79,714; \$800,000 total budget
Period of performance	January 1, 2018–December 31, 2021

Project 3: Advancing Lead Testing in Drinking Water via Lead Field Testing—NIEHS Grant	
Contracting activity	Graphene-based Nanosensor Device for Rapid, Onsite Detection of Total Lead in Tap Water
Contract number	2R44ES028656-02A1 (subcontract #: NAFX-RTI #1)
Contract title	National Institute of Environmental Health Sciences (NIEHS) Small Business Innovation Research (SBIR)/Small Business Technology Transfer Phase II grant
Contractor status	Sub-awardee
Program contact	Ganhua Lu
Telephone	(414) 975-0212
Email	ganhualu@gmail.com
<p>Description of project: RTI is participating in activities for a project titled Graphene-based Nanosensor Device for Rapid, Onsite Detection of Total Lead in Tap Water, which was awarded by NIEHS SBIR Program Phase II. The project team will collect residential drinking water samples and compare the lead levels measured by a hand-held sensor device and by standard EPA methods for drinking water lead analysis by using ICP-MS. We will use the results to validate the performance of the hand-held sensor. RTI is assisting with validating the testing device in both laboratory and field settings, working closely with the research team at NanoAffix throughout the 3-year project. For this project, participants will receive on-site visits for training on how to properly use of the field sensor and how to collect samples for laboratory analysis. Upon receipt of water samples, RTI will use EPA Method 200.8 to analyze lead by using ICP-MS.</p>	
Total contract amount	\$88,251, total award amount of \$653,010
Period of performance	September 26, 2019–August 31, 2021

Exhibit A4. Example of our operational enrollment, analysis, and reporting portal: www.cleanwaterforuskids.org.

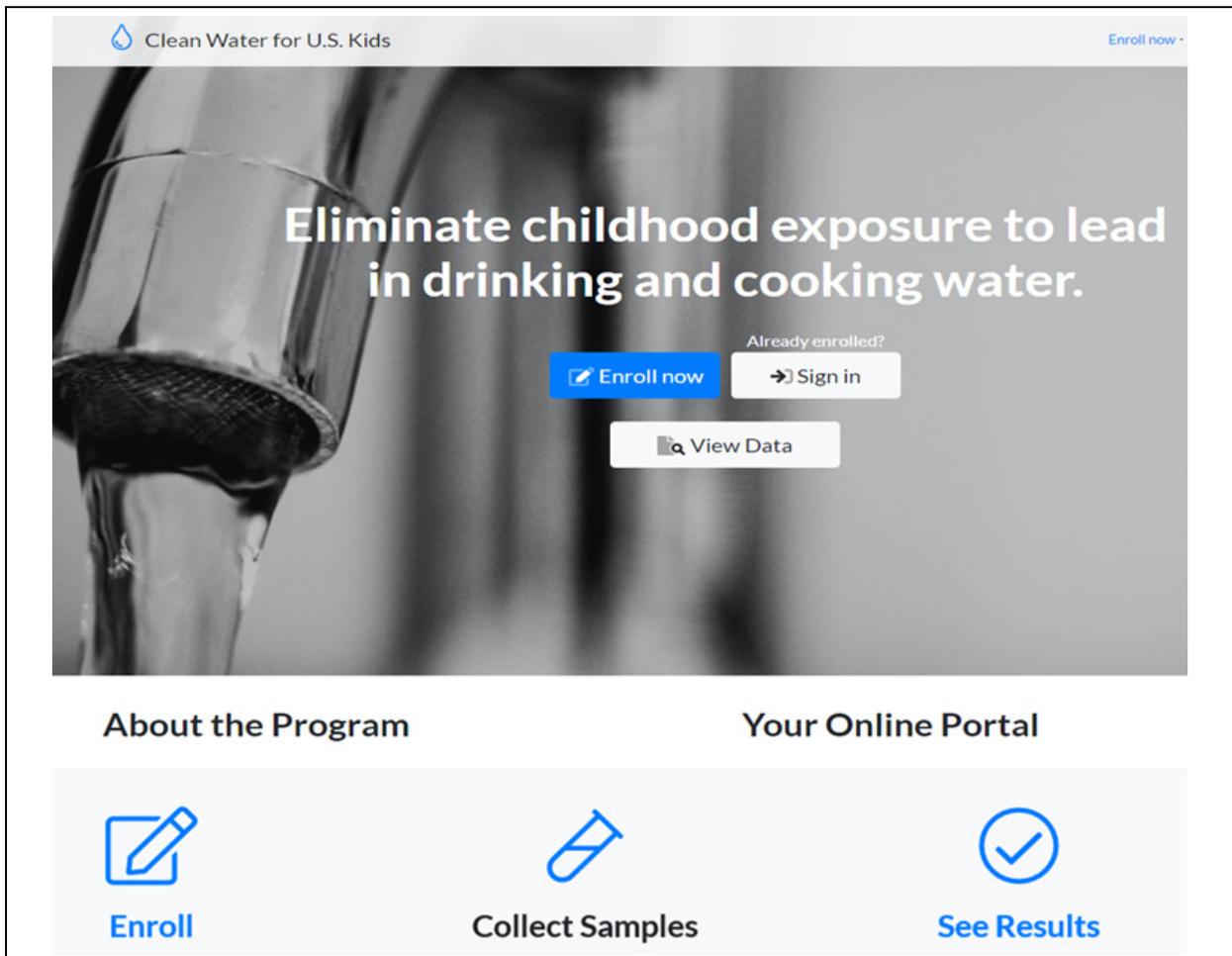


Exhibit A5. Enrollment survey landing page: This web survey will assist schools in developing a plumbing profile, which will identify how many sample bottles they will need to request and which areas need to be sampled.

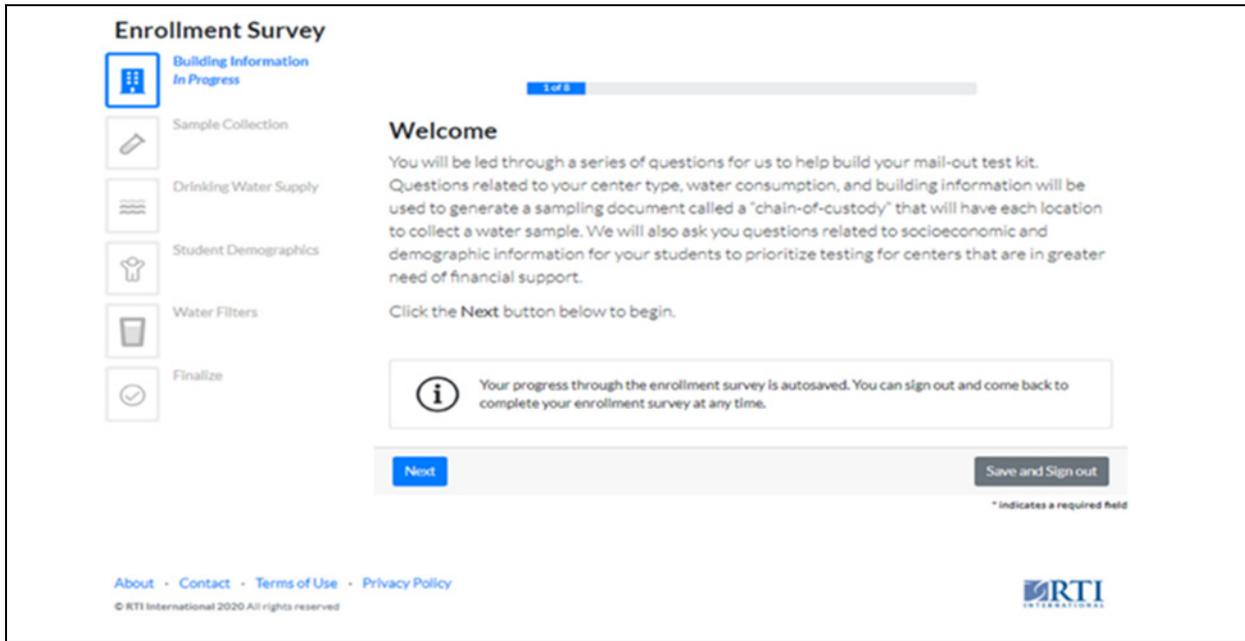


Exhibit A6. Sample collection survey: the example shown is for kitchens.

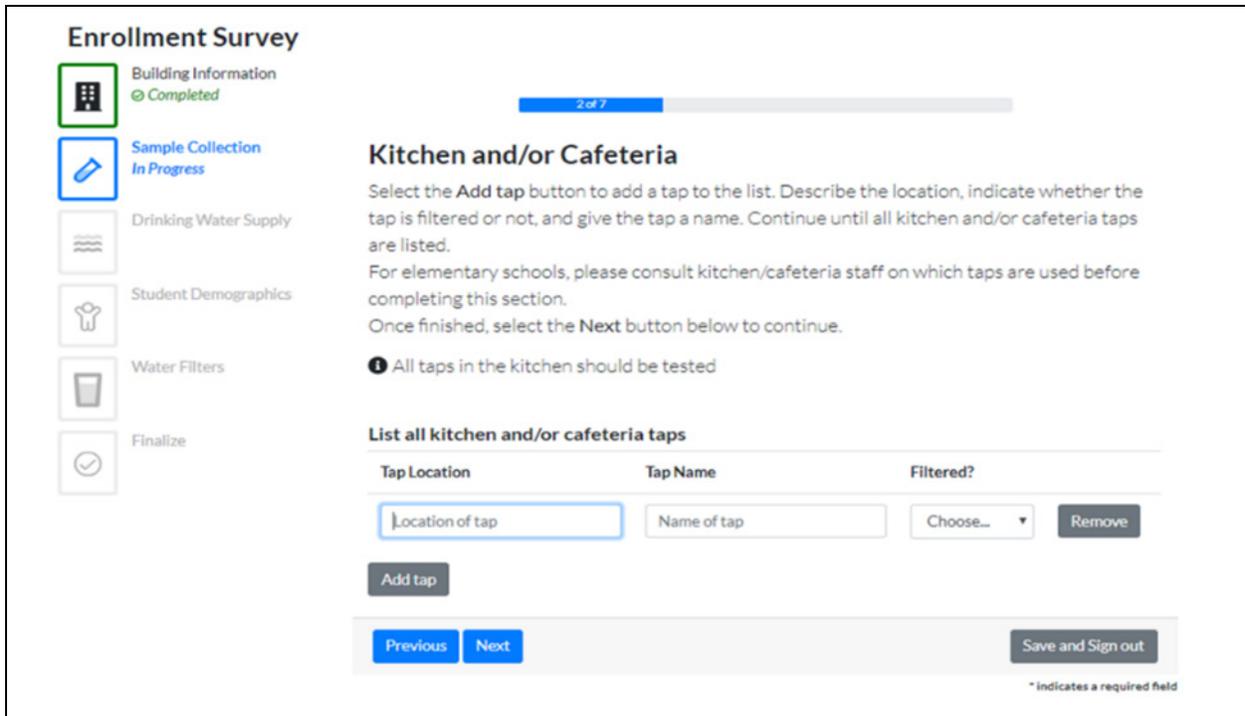


Exhibit A7. A complete enrollment report for a single center. This administrative report from RTI program staff documents the full sampling process from school and childcare center enrollment through sampling to sharing of results, including those at or above 15 ppb.

Clean Water for Carolina Kids
joejohnson@rti.org

Enrollment

Facility		Status	
Name	Joe's Child Care Center [TESTDATA]	Enrollment Status	COMPLETED
County	Wake	Enrollment Started Date	2019-12-03 14:50:07
Address	101 Testing Ln, Cary, NC 27519	Enrollment Completed Date	2019-12-03 14:57:15
		Enrollment Package Status	COMPLETED
		Enrollment Package Generation Date	2019-12-03 15:27:41
		Analysis Results Status	COMPLETED
		Analysis Results Viewed By Center	03-DEC-19

Taps

COC ID	Room	Location	Name	Filtered	Sample ID	Pb (µg/L)	Analysis Date
21	Classroom: Room 101 (Wolfpack Room)	Room Sink	Class food prep	N	W00001	14.98	2019-12-03 00:00:00
21	Classroom: Room 102 (Tiger Room)	Room Sink	Class food prep	N	W00002	15	2019-12-03 00:00:00
21	Classroom: Room 103 (Pirate Room)	Room Sink	Class food prep	N	W00003	20.1231	2019-12-03 00:00:00
21	Kitchen/Cafeteria	Kitchen	Dishwashing Sink	N	W00004	4.5758	2019-12-03 00:00:00
21	Kitchen/Cafeteria	Kitchen	Food Prep Sink	N	W00005	9.0702	2019-12-03 00:00:00
21	Water Fountains	Back Hallway	Hall Water Fountain	N	W00006	MISS	2019-12-03 00:00:00

Packages

COC ID	Outbound Tracking Number	Outbound Status	Outbound Last Updated	Inbound Tracking Number	Inbound Status
21	1212345E0205271688	[{"Type":"D","Description":"DELIVERED","Code":"KM"}]	03-DEC-19	1212345E0205271688	[{"Type":"D","Description":"DELIVERED","Code":"KM"}]

Notifications

Notification Type	Notification Date	Recipient List
Lead >= 15ppb	03-DEC-19	joejohnson@rti.org
Analysis Complete	03-DEC-19	joedavidjohnson@gmail.com
Package delivered to RTI	03-DEC-19	joedavidjohnson@gmail.com
Package delivered to center	03-DEC-19	joedavidjohnson@gmail.com
Package in transit to RTI	03-DEC-19	joedavidjohnson@gmail.com
Package in transit to center	03-DEC-19	joedavidjohnson@gmail.com

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Exhibit A8. (Top panel) An example mitigation survey on the center dashboard and (bottom panel) a report viewed through the public mapper.

The image displays two panels related to water quality monitoring. The top panel is a dashboard for 'Clean Water for Carolina Kids - STAGING'. It features a 'Dashboard' section with 'Clean Water is Awesome' information, enrollment status, analysis results, test kit details, and a list of taps. A modal window titled 'Food Prep Sink - W01733' is open, showing a mitigation survey form for Classroom 1 (Butterfly Room) - Room 1. The form includes instructions, a note about state action levels, and lists of remediation measures under categories like 'No-cost Clean Water Habits', 'Low-cost Risk Mitigation Measures', and 'Stop Water Use Immediately'. The bottom panel is a public mapper report for the same tap. It provides details on the location (Classroom 1 (Butterfly Room) - Room 1), tap name (Food Prep Sink), lead analysis results (15.00 ppb), state laboratory results (State Visit Pending), and a list of remediation actions taken on December 9, 2020, such as 'Fixed Clogs', 'Changed to lead free products for drinking and eating', and 'Placed DO NOT USE signs'.

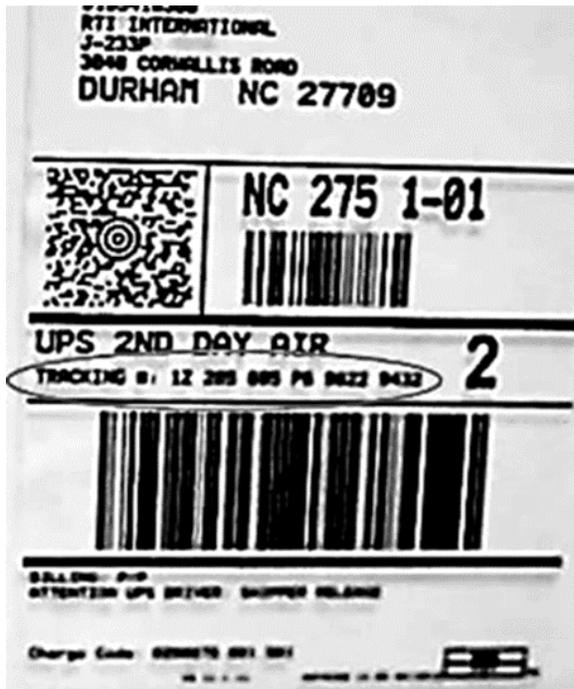
Exhibit A9a-d. An infographic that shows the sample kit contents and UPS tracking information.



a



b



c

Avoid Common Mistakes

- Do NOT allow someone in the building to start using water before you complete all sampling.
- Do not flush or use any water at your Center prior to water sampling for at least 8 hours. Maintain normal water usage in the week up to sampling.
- Do NOT remove any aerators on your tap prior to collecting these samples.
- Do NOT close the shutoff valves on the pipes beneath the sinks.

d

Exhibit A10. An example of the results generated when sample results are uploaded into the portal.

Clean Water for Carolina Kids

joedavidjohnson@gmail.com

WILLIAMSTON PRIMARY PRESCHOOL
 400 WEST BOULEVARD, WILLIAMSTON, NC 27892

[Print these results](#)

North Carolina
Public Health

Health and Human Services
Child Development
and Early Education

RTI
INTERNATIONAL

Thank you for participating in RTI International's Clean Water for Carolina Kids program to help protect children's health and to meet requirements associated with rule amendment 15A NCAC 18A .2816 ([Lead Poisoning Hazards in Child Care Centers](#)) for childcare center licensure.

We received the 5 water samples you collected. Your center's samples were analyzed at our laboratory on **AUGUST 10, 2020**. This letter provides additional information about our analysis method and your center's results.

Your Childcare Center's Water Results

We did detect lead in your center's drinking and cooking water samples. **Table 1** shows that these levels range from 0.1 to **▲15 ppb**.

Table 1. Laboratory Analytical Results and Recommendations

Alert	Sample ID	Description	Location	Lead (ppb)	Recommendation Type (see Table 2)
	W01728	the only tap	Classroom: test room 1 (the only room) ' room1	5.00	Lead detected at or above 5 ppb and below 15 ppb ● Strongly recommend low-cost solutions
	W01729	the only tap	Classroom: test room 1 (the only room) ' room1	1.03	Lead detected at or above 1 ppb and below 5 ppb ● Recommend low-cost solutions
▲	W01730	Food Sink	Kitchen/Cafeteria ' Kitchen	15.00	Lead detected at or above 15 ppb ● Stop use immediately; health official visit pending
	W01731	bottle water	Other ' Bottle water	0.10	Lead detected below 1 ppb ● No-cost solutions
?	W01732	Bottle station	Water Fountains ' Hallway		Sample not received, missing or not sampled

Stop use immediately for taps above 15 ppb while waiting for on-site health official visit. Use no-cost solutions and low-cost solutions for taps below 15 ppb.

Figure 1. Illustration of Recommended Risk Mitigation Based on Test Results for Each Tap.

Lead concentration in drinking water (parts per billion or ppb)
 0.1 ppb: Clean Water for Carolina Kids detection limit
 1 ppb: American Association of Pediatrics recommended level
 5 ppb: Proposed NC state action level
 15 ppb: Current NC state action level

- There is no safe level of lead exposure for children; therefore, we recommend taking proactive, no-cost measures for all drinking and cooking water to practice clean water habits.
- We recommend *low-cost risk mitigation measures* for taps that contain lead above 1 ppb.
- For taps with lead above 5 ppb, we strongly recommend *low-cost risk mitigation measures*.
- For taps with lead above 15 ppb, *stop water use immediately*, post a Do Not Use sign at this tap, and a state or local health official visit will be scheduled to conduct confirmatory testing

Table 2 provides specific recommendations to remove lead from drinking and cooking water.

Exhibit A8. An example of the risk mitigation recommendations provided for participants based on recommendations developed by RTI.

Table 2. Recommendations to Remove Lead from Drinking and Cooking Water.

Detection Level	Risk Mitigation Recommendation
<p>Lead not detected above detection limit (0.1 ppb) OR detected below 1 ppb</p> <p> Clean water habits <i>Practicing no-cost clean water habits is always an easy way to reduce or eliminate exposure to lead in drinking water.</i></p>	<p>Designate taps used for drinking and cooking. Place designated use signs for children and staff to understand which taps are for consumption or other purposes (e.g., handwashing).</p> <p>Keep it cold: Use only cold water for drinking, cooking, or preparing infant formula.</p> <p>Clean the faucet: Remove and rinse loose debris from faucet strainers/aerators regularly.</p> <p>Empower parents, staff, and students: Communicate the center’s findings and clean water actions to parents, staff members, and children.</p>
<p>Lead detected at or above 1 ppb</p> <p> We recommend you also use low cost solutions <i>The goal for lead exposure is 0. These low-cost solutions can help reduce or eliminate lead at or above 1 ppb.</i></p>	<p>Install and maintain certified water filters: Install a water filter certified to remove lead at the point-of-use for drinking and cooking taps. Ensure that the filter is maintained and filter replacement follows manufacturer specifications. One cost-saving option is to designate one clean tap (i.e., one faucet for drinking and cooking) and use a filter on that faucet only. Other faucets may continue to be used for non-potable use with proper signage (e.g., handwashing).</p> <p>Replace faucet fixtures: Sometimes the faucet fixture is the source of lead. Hiring a plumber to change a faucet fixture to a non-brass/non-chrome (stainless steel for example) fixture may reduce or eliminate the level of lead detected.</p> <p>Fix clogs: If you have plumbing backups, have a plumber fix the clog and reduce lead particulate that may enter the water.</p> <p>Let it run: Let cold water run from the tap for 1–5 minutes prior to use, after periods of inactivity (e.g., first thing in the morning and after holiday breaks), or even before each use.</p> <p>Replace water fountains and/or water coolers: Consider replacing existing water fountains and water coolers with a new fountain or water cooler dispenser that meets the current and most stringent lead-reduction regulations; ensure these new products are also equipped with certified filtration systems. If this is not feasible, consider designating a nearby tap without detectable lead for drinking and cooking and shutting off the fountain with proper signage.</p> <p>Use lead-free hoses: Post a designated sign (e.g., “Water Play Only”). Purchase an NSF-certified lead-free hose in case children incidentally ingest water during play.</p> <p>Use lead-free products for drinking and eating: Use certified lead-free water coolers for the playground or outside; as well as lead-free cups and dishware for drinking and eating.</p>
<p>Lead detected at or above 5 ppb</p> <p> We STRONGLY recommend you use the low cost solutions noted above</p>	<p>Lead detected above 15 ppb</p> <p></p> <p> State support <i>A health official will visit for follow-up testing and support. You are required to follow these short-term measures while waiting for support.</i></p> <p>Do not use water source: Immediately stop use at the problem tap. Post “Do Not Use” signage and cover the tap in tape so it cannot be turned on.</p> <p>Provide alternate drinking water sources: Use water from another tap that was designated as clean for drinking or cooking, have children bring in their own bottled water from home, or purchase bottled water while waiting for health department support.</p> <p>The state or your local Health Department will contact you for a follow-up testing visit to confirm the test result and help fix the problem using low-cost solutions, with test confirmation that lead has been removed.</p>

Per state requirements, this data is publicly available on our [mapper](#). We encourage you to share this data with the parents leaving their kids at your center by including this link to your results <https://wlin.sbsdev.rti.org/data/center/58000074> in an email or on your website. Additionally, you may login to the portal to report any mitigation steps you’ve taken at each of your sampled taps.

Analysis Method

RTI’s [Trace Metals Laboratory](#) is certified by the state of North Carolina for the analysis of lead in drinking water by Environmental Protection Agency Method 200.8; our Trace Metals Laboratory also has passed the state performance evaluation. We preserve samples by immediately adding nitric acid prior to laboratory analysis. Our scientists use state-of-the-science laboratory equipment that allows us to detect lead in drinking water at a level as low as 0.1 part per billion (ppb), which is the same as micrograms per liter (µg/L); 0.1 ppb equals less than a drop in an Olympic-sized swimming pool.

If you have questions, please check out our [Frequently Asked Questions \(FAQs\) responses](#). If your question or comment is not addressed in the FAQ you can contact staff at the Clean Water for Carolina Kids Program partnership at our [contact page](https://www.cleanwaterforcarolinakids.org/contact) (<https://www.cleanwaterforcarolinakids.org/contact>) or via phone at 1-888-997-9290. This contact support page will route your questions and comments to program staff, including directors Mr. Ed Norman at the NC Division of Public Health and Ms. Jennifer Hoponick Redmon of RTI International.

Exhibit A9. The Clean Water for Carolina Kids Program administration view shows high-level statistics for the program, including enrollment and sample status, and allows the program administrators to create reports and view data.

Exhibit A10. The enrollment tracking interface by facility, which allows system administrators to view all enrollments online with their respective status.

Facility Name	Operating Status	Facility Location	Enrollment Status	Enrollment Started Date	Enrollment Completion Date	Enrollment Package Status	Enrollment Package Generation Date
AJ Test Center	Normal	Durham, NC	STARTED	2020-05-08 18:11:38			
JHop TEST	Reduced	Durham, NC	STARTED	2020-03-26 15:05:30			
Joe's Child Care Center [TESTDATA]	Unknown	Cary, NC	COMPLETED	2019-12-03 14:50:07	2019-12-03 14:57:15	COMPLETED	2019-12-03 14:57:15

Exhibit A11. The initial public reporting website for schools and childcare centers in the State of North Carolina. RTI staff will recreate this public reporting mapper for the State of West Virginia so reported results can be viewed by the public, including other school and state staff, parents, and administrators who want to view results from their schools or others in the state.

North Carolina Child Care Centers

View lead sampling data for North Carolina child care centers

[Search by Name or Address](#)

View child care center by county

Center Name	Status
<i>Select a county to view child care center data</i>	



Exhibit A12. An example of educational material developed by RTI.

Clean Water for Carolina Kids

Information on Lead in Drinking Water



As part of the Clean Water for Carolina Kids study, RTI International has compiled the following information for parents and child care providers on lead in drinking water; this information comes from reliable scientific and government resources. Please contact us for more information about the Clean Water for Carolina Kids study.

Exhibit A13. Sample screenshots of three out of seven already created training videos (available at <https://www.cleanwaterforcarolinakids.org/howto>).



How to sample for lead in your center's water

In this video, Ms. Redmon demonstrates how to properly use the testing kit to sample drinking water for lead.



What happens to your water samples in the lab?

In this video, you meet Ms. Redmon in the laboratory at RTI. She will show you what happens when they receive your water.



Understanding the results of your water tests

In this video, Ms. Redmon will help you understand your test results. If the laboratory detects lead in your water, you have options about what to do. She will walk you through those options.

Exhibit A14. An example of a Contact Us screenshot for Zendesk to provide technical assistance to facilities that have experienced any difficulty with registering, using the online portal, conducting sampling, or understanding their results.

Clean Water for Carolina Kids

Contact Us

Address

Clean Water for Carolina Kids
3040 E Cornwallis Rd
Durham, NC 27709

Voicemail

1-888-997-9290

If you prefer to not use the question form on this page, you can leave us a voicemail at the listed number. In order for us to respond, please leave a message with your name, email, and a description of your issue.

If you have a question or issue, please fill out and submit the question form below.

We aim to respond to questions within two business days. If it has been longer than that we are working on resolving your issue and will respond to you as quickly as possible. Please refrain from duplicate tickets while awaiting a response.

Please note that comments and calls go to the same team, so you do not need to leave both a voicemail and a message.

Security Check:

I'm not a robot

Your Name *

Your child care center's name *

Question Type *

Choose...

Describe Question *

Exhibit A15. An example of a Chain-of-Custody Form automatically generated from RTI's Clean Water for U.S. Kids portal. RTI will pre-fill the information in blue and a facility ID for each school. The school will add information in white cells, which will be uploaded to the online portal when the sample kit has been returned to RTI.



CHAIN OF CUSTODY

Fill in the white spaces below

FACILITY ID: --Sde675fe57a4f1.34309738

Maple Elementary School

PAGE 1 of 1

Lab Sample ID	DATE OUTLET LAST USED	TIME OUTLET LAST USED	SAMPLE ID / DESCRIPTION	SAMPLE TYPE <small>I=Initial R=Replacement C=Confirmation F=30s flush RM=Remediation</small>	DATE of COLLECTION	TIME of COLLECTION	MATRIX	*pH and PRESERVATIVE (added after receipt in laboratory)	ANALYSIS and METHOD
W00001			Kitchen/Cafeteria: Kitchen / Dishwashing Sink				DW	HNO3	EPA 200.8
W00002			Kitchen/Cafeteria: Kitchen / Food Prep Sink				DW	HNO3	EPA 200.8
W00003			Water Fountains: Back Hallway / Hall Water Fountain				DW	HNO3	EPA 200.8
W00004			Classroom: Room 101 (Wolfpack Room): Room Sink / Class food prep				DW	HNO3	EPA 200.8
W00005			Classroom: Room 102 (Tiger Room): Room Sink / Class food prep				DW	HNO3	EPA 200.8
W00006			Classroom: Room 103 (Pirate Room): Room Sink / Class food prep				DW	HNO3	EPA 200.8

*preservative is added after receipt of samples back at the laboratory and pH verified by the Thermo Gallery (<2).

COLLECTED/RELINQUISHED BY (1):	DATE:	TIME:	RECEIVED BY:	RECEIVED BY LABORATORY:	DATE:	TIME:
				COC SEAL: <input type="checkbox"/> INTACT <input type="checkbox"/> BROKEN <input type="checkbox"/> ABSENT		
COLLECTED/RELINQUISHED BY (2):	DATE:	TIME:	SAMPLE RECEIPT TEMP (°C):	TRACKING #:		
			CARRIER:			

Comments:

Exhibit A16. An example of a pre-populated listing to facilitate online enrollment; enrollees can select their school or childcare center to begin enrollment or can manually enter their information.

Select your child care center

Search by name or address

- "LITTLE FRIENDS" DAYCARE HOME
884 RIDGE RD, MOCKSVILLE, NC 27028
- "A" PRECIOUS ANGEL DAYCARE
916 SOUTH MINERAL SPRINGS ROAD, DURHAM, NC 27703
- "BUILDING BLOCKS" LEARNING CENTER
211 HELEN STREET, FAYETTEVILLE, NC 28303
- "HAPPY FACES" CHILD CARE CENTER
4500 EMMIT DRIVE, RALEIGH, NC 27604
- "KIDS ARE US" CHILDCARE CENTER
130 SPRING BRANCH ROAD, MURFREESBORO, NC 27855
- "SMALL BLESSINGS"
41 HEARTH LANE, SMITHFIELD, NC 27577

Appendix B: Example of Quarterly and Annual Reports

Exhibit B1. An excerpt from a recent North Carolina WIIN grant quarterly report developed by RTI.

Number of Schools and/or Child Care Facilities with Plans for Remediation	Number of Schools or Child Care Facilities with Plans for Replacement	Breakdown of Schools Tested: Number of Public Schools	Breakdown of Schools Tested: Number of Child Care Facilities
Indicate the total number of schools or child care facilities that, having detected lead levels after testing, have carried out or will carry out plans, follow-up steps, or remediation activities during the quarterly reporting period.	Indicate the total number of schools or child care facilities that, having detected lead levels after testing, have carried out or will carry out plans, follow-up steps, or replacement procedures/activities during the quarterly reporting period.	Indicate how many facilities tested during the quarterly reporting period are classified as "public" schools as determined by the U.S. Department of Education and respective state regulations.	Indicate how many facilities tested during the quarterly reporting period are classified as child care facilities as determined by the U.S. Department of Education and respective state regulations.
14	14	2	352
* up to or exceeding 14. Pending mitigation mapper addition to portal will allow further tracking of this	* up to or exceeding 14. Pending mitigation mapper addition to portal will allow further tracking of this		

Exhibit B2. Examples of annual reports. These reports provide the activities accomplished in a period of time.

EXAMPLE REPORT #1

MEMORANDUM

TO: L.C. Greene, Project Supervisor
C. A. Salmons, Project Quality Assurance Officer
RTI Staff for BePAT Proficiency Testing Program

FROM: W. G. Winstead, Program Manager

SUBJ: 2019 Management Review of the Beryllium Proficiency Analytical Testing (BePAT) Program

DATE: December 18, 2019

The RTI BePAT Program is committed to maintaining the highest quality program possible. Although we are not seeking American Association for Laboratory Accreditation (A2LA) accreditation as a PT provider at this time, we are committed to meeting the standards of ISO/IEC 17043:2010 General requirements for proficiency testing. Current A2LA management system polices require that, among many other quality management procedures and processes, a management review of the systems, facilities, and operations associated with RTI's technical support of the BePAT Program be conducted on an annual basis. This review is separate from the annual internal QA audit performed by the RTI Quality Manager for that program.

I completed on this date my annual management review of the BePAT Program covering the period from December 19, 2018 through December 18, 2019. All scheduled activities for the program for 2019 have been completed as of this date. Guidance for performing the review was RTI SOP Number EISD 1012-001, "Standard Operating Procedure for Annual Management Review of Environmental and Industrial Sciences Division (EISD) Laboratories and Proficiency Testing Programs". It is a requirement of the RTI Quality Manual (QM) for the BePAT program that the findings of the review be made available to all project staff and project management. This memorandum serves as the report of findings of that review, relating to the following topics:

Suitability of policies and procedures

Assessment of the suitability of program policies and procedures is facilitated by RTI's ongoing effort to maintain, as current as possible, a management system – including a QM and associated documentation – for the BePAT program.

At this time, I consider all BePAT Program policies and procedures to be suitable,

appropriately documented, current, and in full compliance with the requirements of ISO/IEC 17043:2010 and with those of ISO/IEC 17025:2017.

Management reports shared with laboratory staff

Reports of all management reviews will be made available to project staff, the Project Supervisor, and the Project QA Officer within two weeks of the actual conduct of the management review after approval by upper management.

Internal audit results shared with laboratory staff

The annual internal audit of the program was completed on December 16, 2019 by the Project Quality Manager. She made her report available to me on that date. This audit was conducted using the comprehensive A2LA Checklist: CK5734 Proficiency Testing Provider - ISO/IEC 17043 - Accreditation Program General Checklist (Formerly C316). Any deficiencies and findings of the internal audit by the Quality Manager are described in the internal audit report being made available with this management report.

Corrective and preventive actions

For the assessment period covering December 19, 2018 through December 18, 2019, there were no events deemed to be out of conformity with any element of the program's management system.

There were no Corrective or Preventive Actions during this period.

Changes to Program Management

In the past year, there have been no RTI management or client management re-organizations to impact the program. Moven Mututuvvari is the HPS project leader. Kelsey Culbertson is a primary contact.

The Quality Manual was updated in December 17, 2019. The Quality Manual was modified to change the analysis requirement for samples used for BePAT retests. Previously, samples were required to have been analyzed within one year prior to being sent to BePAT participants as a retest sample. Stability studies performed since 2011, indicate that the samples are stable for many years. We modified the Quality Manual to require that samples provided for retests must have been analyzed in the last three years. Other changes to the Quality Manual were minor.

Need or Requirement for New Standard Operating Procedures

There were no new standard operating procedures established since November 9, 2016.

Assessments by accrediting bodies or regulatory agencies

The BePAT program is not seeking accreditation as a PT provider by A2LA at this time. However, we are committed to following the A2LA requirements for PT providers as evidenced in our alignment of the QM with CK5734 Proficiency Testing Provider - ISO/IEC 17043 - Accreditation Program General Checklist (Formerly C316).

Results of proficiency tests and interlaboratory comparisons

AIHA PAT Programs does not require PT participation by their PT-providing contractors. However, RTI independently analyzes the BePAT samples and compares the RTI results with the HPS Certified Values.

Changes in the volume or type of testing

The volume of testing - four test samples per test round and three rounds per year - has not changed during the assessment period. The type of testing has not changed.

The number of enrolled laboratories dropped to 29 participants during in the third round in 2019.

Client complaints and communications

The program has two clients, AIHA PAT Programs and the participating laboratories. RTI has received no complaints from AIHA PAT Programs or participating laboratories in the period covered by this management review. Communications with AIHA PAT Programs include Angela Oler, David Clawson, and Kim Bacon for laboratory enrollment, data management, and reporting. Communication by e-mail and telephone among all parties is exchanged on a regular, as-needed basis, and appears to be effective and timely.

AIHA PAT Programs is primarily responsible for all communication with participating laboratories. Information is also posted on the AIHA PAT Programs website for participants.

Staffing resources and training requirements

James Medlin is no longer at RTI. Eric Poitras will be performing the confirmatory analysis for future rounds. Eric has extensive experience with sample analysis, and he will complete his qualification before analyzing the next round of samples. All members are extremely well-versed in the aspects of support they provide, and adhere to all requirements of the management system, including the QM and long-established SOPs.

Recommendations for Improvement

There are no general or specific recommendations for improvements to the program currently.

Each round, small steps are taken to add checks within the sample packaging, grading, and reporting process to further reduce the risk of errors in the future. These include adding or expanding notes or explanations to the grading routines and the reports. Similarly when possible, additional checks are added to the grading routines to confirm that numbers have been updated and/or calculated correctly. We will continue to search for ways to improve the program and reduce the risk of errors.

End of Document

EXAMPLE REPORT #2

Data Element	Instructions/Description	Input
State	Select from the pre-populated dropdown list of states/territories.	North Carolina
Grant Number	Enter the Assistance Listing (formerly the Catalog of Federal Domestic Assistance, or CFDA) number attached to the reporting program.	01D01720
Project Title	Insert the full formal title of the state's lead testing program that is funded by the WIIN grant.	NC WIIN grant
State Agency with Oversight	Insert the name of the state agency (or agencies) with oversight of the lead testing program.	North Carolina
State Contact (Department/Branch)	Insert the name of the office, department, or division within the state agency that is coordinating and executing the implementation of the lead testing program.	DHHS
Reporting Period Covered: (mm/dd/yyyy)	Enter the start and end dates for the quarterly reporting period for the data collection report in mm/dd/yyyy format.	1/1/2020 to 12/31/2020
Sampling/Testing Process: Is this a new program or expanded program for the state?	Select from the pre-populated dropdown list of New Program or Expanded Program. Select New Program if your state has not started planning for testing lead in drinking water at schools and child care facilities. Select "Existing Program" if your state has initiated activities related to planning and/or testing.	Sampling/Testing Process
State-Specified Lead Action Level in ppb (if applicable)	This does not apply to all states. This is the state-specified action level that a state uses for compliance with the Lead and Copper Rule. Some states may have specified through a state regulation an action level more stringent than the 15 ppb action level specified in the Lead and Copper Rule.	5 ppb
WIIN Lead Testing Program Baseline Level for Schools and/or Child Care Facilities (in ppb)	States that receive WIIN grants are required to establish a baseline level of lead in parts per billion (ppb) for schools and/or child care facilities that triggers follow-up activities, remediation, or replacement. This may be dictated by a state regulation but not in all cases (see row 9).	15 ppb

Number of Schools Expected to Participate in the Lead Testing Program	Number of Child Care Facilities Expected to Participate in the Lead Testing Program	Number of Schools Tested	Number of Child Care Facilities Tested	Total Amount of WIIN Grant Funding Spent to Test for Lead Exposure in Drinking Water in Schools and/or Child Care Facilities
Include the number of schools that were anticipated to test for lead in drinking water by the end of the quarterly reporting period.	Include the number of child care facilities that were anticipated to test for lead in drinking water by the end of the quarterly reporting period.	Indicate the number of schools that completed testing during the quarterly reporting period.	Indicate the number of child care facilities that completed testing during the quarterly reporting period.	Include the whole dollar amount of grant funding spent during the quarterly reporting period.
Not testing schools at this time	6500	Not testing schools at this time	3500	\$405,000

Total Other Federal Dollars Spent to Test for Lead Exposure in Drinking Water in Schools and/or Child Care Facilities (if applicable)	Total Non-Federal Dollars Spent to Test for Lead Exposure in Drinking Water in Schools and/or Child Care Facilities (if applicable)	Population of Children Impacted by Testing Conducted	Number of Schools and/or Child Care Facilities with Lead Detected in More Than 51% of Samples Collected (based on lab sample results)	Number of Schools and/or Child Care Facilities with Lead Results that Exceeded the WIIN Lead Testing Program Baseline Level
Include the whole dollar amount of other Federal (i.e., non-WIIN grant funding) dollars funding spent to implement the testing program during the quarterly reporting period.	Include the whole dollar amount of non-federal funding spent to implement the testing program during the quarterly reporting period.	Indicate the total number of children enrolled in the tested schools and child care facilities at the time of testing during the quarterly reporting period.	Indicate the total number of schools and child care facilities that detected lead in more than 51% of samples collected during the quarterly reporting period.	Indicate the total number of schools and child care facilities with lead sample results that exceeded the WIIN lead testing program baseline level during the quarterly reporting period.
Not testing schools at this time	\$15,000	42,000	245	1800

Number of Schools and/or Child Care Facilities with Plans for Follow-up Activities	Number of Schools and/or Child Care Facilities with Plans for Remediation	Number of Schools or Child Care Facilities with Plans for Replacement	Breakdown of Schools Tested: Number of Private Schools
Indicate the total number of schools or child care facilities that, having detected lead during testing, have carried out or will carry out plans, follow-up steps, or procedures/activities to reduce lead exposure during the quarterly reporting period.	Indicate the total number of schools or child care facilities that, having detected lead levels after testing, have carried out or will carry out plans, follow-up steps, or remediation activities during the quarterly reporting period.	Indicate the total number of schools or child care facilities that, having detected lead levels after testing, have carried out or will carry out plans, follow-up steps, or replacement procedures/activities during the quarterly reporting period.	Indicate how many facilities tested during the quarterly reporting period are classified as "private" schools as determined by the U.S. Department of Education and respective state regulations.
500	150	250	Not testing schools at this time

Breakdown of Schools Tested: Number of Public Schools	Breakdown of Schools Tested: Number of Charter Schools	Breakdown of Schools Tested: Number of Child Care Facilities	Breakdown of Schools Tested: Number of Other
Indicate how many facilities tested during the quarterly reporting period are classified as "public" schools as determined by the U.S. Department of Education and respective state regulations.	Indicate how many facilities tested during the quarterly reporting period are classified as "charter" schools as determined by the U.S. Department of Education and respective state regulations.	Indicate how many facilities tested during the quarterly reporting period are classified as child care facilities as determined by the U.S. Department of Education and respective state regulations.	Indicate how many facilities tested during the quarterly reporting period are categorized as "other" types of educational institutions as defined by the U.S. Department of Education and respective state regulations.
Not testing schools at this time	Not testing schools at this time	3500	0

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ EHS210000001

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input checked="" type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Research Triangle Institute

Company



Authorized Signature

12/21/2020

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

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

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

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

DEFINITIONS:

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

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

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

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

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Research Triangle Institute

Authorized Signature: [Signature] Date: 12/21/2020

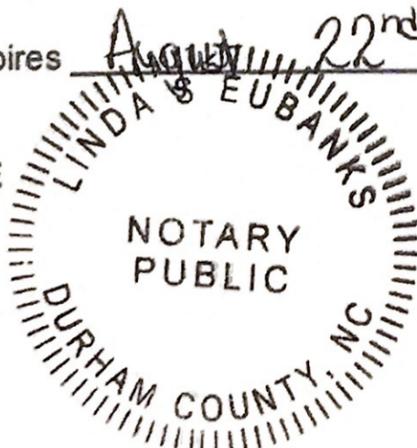
State of North Carolina

County of Durham, North Carolina to-wit:

Taken, subscribed, and sworn to before me this 21st day of December, 2020.

My Commission expires August 22nd, 2023

AFFIX SEAL HERE



[Signature]
NOTARY PUBLIC

Research Triangle Institute – Point of Contact Information

Reference: *CRFQ EHS2100000001_Solicitation Terms and Conditions.pdf*

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)

Skye Brodish, Contract Negotiator

(Printed Name and Title)

RTI International, 3040 East Cornwallis Road, Research Triangle Park, NC 27709

(Address)

919-541-6451 / N/A

(Phone Number) / (Fax Number)

sbrodish@rti.org

(email address)

Reference: *CRFQ EHS2100000001_Solicitation Specifications.pdf*

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:	<u>Katherine Mangum</u>
Telephone Number:	<u>919-541-8045</u>
Fax Number:	<u>N/A</u>
Email Address:	<u>kmm@rti.org</u>

Research Triangle Institute – Vendor Certifications

Reference: *CRFQ EHS2100000001_Solicitation Terms and Conditions.pdf*

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.

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

Research Triangle Institute d/b/a RTI International

(Company)



(Authorized Signature) (Representative Name, Title)

Skye Brodish, Contract Negotiator

(Printed Name and Title of Authorized Representative)

12/21/2020

(Date)

919-541-6451 / N/A

(Phone Number) / (Fax Number)