AWARD/CONTRACT	1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)	RATING	PAGE OF PAGES 1 | 3

2. CONTRACT (Proc. Inst. Ident.) NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUEST/PROJECT NO.
EP-C-17-031/68HERC19F0301	See Block 20C	PR-OW-19-00423

5. ISSUED BY CODE CAD

CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

6. ADMINISTERED BY (If other than Item 5) CODE

7. NAME AND ADDRESS OF CONTRACTOR (No., street, country, State and ZIP Code)

TETRA TECH, INC.
Attn: George Townsend
10306 EATON PL STE 340
FAIRFAX VA 22030

CODE 198549560 FACILITY CODE

8. DELIVERY
☐ FOB ORIGIN ☒ OTHER (See below)

9. DISCOUNT FOR PROMPT PAYMENT

10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN — ITEM

11. SHIP TO/MARK FOR CODE OW-OWOW-AWPD-MB

AWPB-MB
US EPA-OW-OWOW-AWPD-MB
1200 PENNSYLVANIA AVE., NW
MC-4503-T
WASHINGTON DC 20460

12. PAYMENT WILL BE MADE BY CODE RTP FMC

RTP Finance Center
US Environmental Protection Agency
RTP-Finance Center (AA216-01)
109 TW Alexander Drive
www2.epa.gov/financial/contracts
Durham NC 27711

13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION:
☐ 10 U.S.C. 2304 (c) ( ) ☒ 41 U.S.C. 3304 (a) ( )

14. ACCOUNTING AND APPROPRIATION DATA
See Schedule

15A. ITEM NO	15B. SUPPLIES/SERVICES	15C. QUANTITY	15D. UNIT	15E. UNIT PRICE	15F. AMOUNT
	Continued				

15G. TOTAL AMOUNT OF CONTRACT $165,450.00

16. TABLE OF CONTENTS

(X)	SEC.	DESCRIPTION	PAGE(S)	(X)	SEC.	DESCRIPTION	PAGE(S)
		PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES	
	A	SOLICITATION/CONTRACT FORM			I	CONTRACT CLAUSES	
	B	SUPPLIES OR SERVICES AND PRICES/COSTS				PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.	
	C	DESCRIPTION/SPECS./WORK STATEMENT			J	LIST OF ATTACHMENTS	
	D	PACKAGING AND MARKING				PART IV - REPRESENTATIONS AND INSTRUCTIONS	
	E	INSPECTION AND ACCEPTANCE			K	REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
	F	DELIVERIES OR PERFORMANCE					
	G	CONTRACT ADMINISTRATION DATA			L	INSTRS., CONDS., AND NOTICES TO OFFERORS	
	H	SPECIAL CONTRACT REQUIREMENTS			M	EVALUATION FACTORS FOR AWARD	

CONTRACTING OFFICER WILL COMPLETE ITEM 17 (SEALED-BID OR NEGOTIATED PROCUREMENT) OR 18 (SEALED-BID PROCUREMENT) AS APPLICABLE

17. ☒ CONTRACTOR' S NEGOTIATED AGREEMENT (*Contractor is required to sign this document and return* _____ *copies to issuing office.*) Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award/contract, (b) the solicitation, if any, and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (*Attachments are listed herein.*)

18. ☐ SEALED-BID AWARD (*Contractor is not required to sign this document.*) Your bid on Solicitation Number 68HERC19R0074, including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and your bid, and (b) this award/contract. No further contractual document is necessary. (Block 18 should be checked only when awarding a sealed-bid contract.)

19A. NAME AND TITLE OF SIGNER (*Type or print*)

20A. NAME OF CONTRACTING OFFICER
Andrea Dehne

19B. NAME OF CONTRACTOR — BY _____ (*Signature of person authorized to sign*)

19C. DATE SIGNED

20B. UNITED STATES OF AMERICA — BY ELECTRONIC SIGNATURE (*Signature of the Contracting Officer*)

20C. DATE SIGNED 09/19/2019

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DUNS Number: 198549560 TOCOR: Richard Mitchell Max Expire Date: 09/18/2021 Period of Performance: 09/19/2019 to 09/18/2021 Firm Fixed Price Task Order-Base Period Fully Funded at Time of Award				
0001	Task Order Issuance Line Item: Base Period Technical Support for EPA/ORD Ecological Assessment Programs Delivery: 09/18/2020 Accounting Info: 19-20-B-87FM-000BD4-2505-1987ME9015-001 BFY: 19 EFY: 20 Fund: B Budget Org: 87FM Program (PRC): 000BD4 Budget (BOC): 2505 DCN - Line ID: 1987ME9015-001 Funding Flag: Complete Funded: $165,450.00				165,450.00
	Option Line Item Will be Funded When Exercised				
0001A	Base Period ((b)(4) each) - Sample Qty Option Sub CLIN 0001A (Option Line Item) 183 Days After Award Delivery: 09/18/2020	(b)(4)	EA	(b)(4)	32,025.00
	Option Line Item Will be Funded When Exercised				
0002	Task Order Issuance Line Item: Option Period 1 Technical Support for EPA/ORD Ecological Assessment Programs (Option Line Item) 09/18/2020 Delivery: 09/18/2021				120,550.00
	Option Line Item Will be Funded When Exercised				
0002B	Option Period 1 ((b)(4) each) - Sample Qty Option Sub CLIN 0002B (Option Line Item) 183 Days After Award Delivery: 09/18/2021 Delivery-Invoice Payment Schedule shall not Continued ...	(b)(4)	EA	(b)(4)	54,270.00

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	exceed a frequency greater than once a month and 90% of the task order price. Acceptance for invoicing is based on deliverable approval by the TOCOR. For efficient processing IAW FAR clause 52.232-32, performance based payment invoicing amounts will not be submitted until the TOCOR provides deliverable approval. The TOCOR will notify Tetra Tech within 14 days of submission of a deliverable of EPAs intention to approve or disapprove. TOCOR: Richard Mitchell/(202)566-0644/mitchell.richard@epa.gov ALTOCOR: Hugh Sullivan/(202)564-1763/sullivan.hugh@epa.gov				

PERFORMANCE WORK STATEMENT
Contract EP-C-17-031
PR-OW-19-00423
SOL 68HERC19R0074
TO #68HE0C19F0301

I. Title: NRSA 2019 & NCCA 2020: External Benthic QA and Proficiency Test QC Support

EPA Short title: NRSA & NCCA QA/QC

II. Period of Performance: Date of TO Award through 24 months following award:
Base Period: September 19, 2019 to September 18, 2020
Option Period 1: September 19, 2020 to September 18, 2021

III. TOCOR:
Richard Mitchell
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
WRAPD
1200 Pennsylvania Avenue, NW
Washington, DC 20460
202-566-0644
mitchell.richard@epa.gov

Alternate TOCOR
Hugh Sullivan
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
WRAPD
1200 Pennsylvania Avenue, NW
Washington, DC 20460
202-564-1763
sullivan.hugh@epa.gov

IV. BACKGROUND
The U.S. EPA Office of Water and Office of Research and Development, states and numerous other partners are conducting a survey of the rivers and streams and of the nation's coasts to provide national and regional data on the condition of these waters. These assessments, the National Rivers and Streams Assessment (NRSA) and the National Coastal Condition Assessment (NCCA), are part of a program called the National Aquatic Resource Surveys (NARS). NARS is designed to use a probability-based network that will provide statistically valid information about water resources with known confidence. NRSA field crews will collect samples from just over 1100 sites including benthic samples from each site over the course of 2019. NCCA field crews will collect samples from approximately 1000 sites including collection of benthic samples during 2020.

V. Objectives

The primary objective of this task order (TO) is to conduct laboratory work and quality assurance of samples collected as part of the NARS, specifically the NRSA and the NCCA process to achieve the requirements as defined in the appropriate Quality Assurance Project Plan (QAPP) and Laboratory Operations Manual (LOM). For NRSA documents, see https://www.epa.gov/national-aquatic-resource-surveys/manuals-used-national-aquatic-resource-surveys#National Rivers & Streams Assessment. This work will support the assessment of condition in U.S. rivers, streams and coastal waters as well as assessments of risk. The types of support required for this project includes conducting an independent taxonomic re-identification of 10% of the NRSA and NCCA samples collected in the summer of 2019 and 2020 respectively, including the reconciliation process described in Task 2 of the PWS. The Base Period shall include a quantity range between 90 and 125 benthic samples for NRSA. The Base Period shall also support sending proficiency test (PT) samples (70) per Task 3. Option Period 1 shall include a quantity range between 75 and 120 benthic samples for NCCA. Option Period 1 shall also support sending proficiency test (PT) samples (20) per Task 3.

During the Base Period, the contractor shall receive a quantity range between 90 and 125 NRSA benthic samples for re-identification and inclusion in the reconciliation process (Task 2). During the Base Period, the contractor shall also implement Task 3 for two waves of PT samples to the NCCA national lab and one wave for the three state labs (see Subtask 3.1 for more information).

During Option Period 1, the contractor shall receive a quantity range between 75 and 120 NCCA benthic samples for reidentification and inclusion in the reconciliation process (Task 2). During Option Period 1, the contactor shall also implement Task 3 for one additional wave of PT samples for the NCCA national contract lab.

VI. Quality Assurance (Contract PWS Section 5)

The contractor shall address the QA requirements of this TO through a combination of the NRSA 2018-2019 QAPP and LOM; and the NCCA 2020 QAPP and LOM which document how quality assurance and quality control will be applied to the collection and use of environmental data and/or survey information for this TO. see https://www.epa.gov/national-aquatic-resource-surveys/manuals-used-national-aquatic-resource-surveys#National Rivers & Streams Assessment.

Any project specific quality assurance issues shall be reported in the monthly progress reports as specified under Task 1. The contractor shall document relevant QA activities in any deliverable (e.g., reports). All QA documentation prepared under the TO shall be considered non-proprietary. The contractor shall provide a signed review sheet (in the front of the QAPP) indicating the QAPP and LOM have been read and shall be followed by all personnel participating in this TO.

The contractor shall submit relevant QA documentation as requested by the TOCOR. The contractor shall permit a QA review of laboratory and/or data entry documents and procedures by an authorized agent of EPA at any time during the performance period with advanced notification given. The contractor shall retain original records, such as laboratory notebooks, for a minimum of three years from the date the final report is published on-line by the EPA. Unless the TOCOR grants an exception, the contractor shall not publish findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

SCOPE OF WORK

Task 1: Communication, Prepare Monthly Progress and Financial Reports, Coordination and Notification

SubTask 1.1 Communication/Kickoff Call
The Contractor shall contact the EPA TOCOR and schedule a kickoff project meeting.

SubTask 1.2 Communication and development of a regular reporting schedule
The Contractor shall establish communication with the EPA TOCOR and develop a regular reporting schedule throughout the period of the TO.

SubTask 1.3 Monthly Progress and Financial Reports
Submit and prepare monthly progress and financial reports in accordance. The monthly progress report shall include project status, expenditures to date, unexpected problems or concerns, corrective actions, lessons learned, QA/QC activities, and next steps.

SubTask 1.4 Coordination and notification
This task requires coordination with other organizations and therefore it is particularly important that the Contractor shall notify the EPA TOCOR of issues, problems, questions, or delays as soon as they become apparent or if they are anticipated.

Task 1. Deliverables

Task	SubTask	Deliverable	Due
1	1.1	Communication/Kick-off call	TBD
1	1.2	Regular reporting schedule	TBD
1	1.3	Progress and financial reports	Monthly
1	1.4	Coordination and notifications	Immediately upon knowledge of incident

Task 2: Benthic Independent Taxonomic Quality Control Process (Contract PWS Section 2, Task Area 2)
During the Base Period, Task 2 shall be implemented for a quantity range between 90 and 125 NRSA benthic samples. Five labs are conducting NRSA benthic analyses: the national contract and three state labs (Oklahoma, North Carolina and Wisconsin). For Option Period 1, this Task shall be implemented for a quantity range between 75 and 120 NCCA benthic samples. The samples shall include benthics collected in U.S. estuaries and the Great Lakes. Samples will be processed by two national labs and four state labs.

SubTask 2.1 Benthic QC Preparation
The contractor shall assign a project lead with expertise in benthic QC processes, taxonomy and bioassessments to set up a process to select 10% of the identified benthic samples to be re-identified by independent taxonomists. The contractor shall identify independent taxonomists to complete the re-identification work.

The contractor shall set up a process to identify which processed samples will be selected from the primary national and state benthic lab for re-identification. The TOCOR will provide the contractor with a sampling processing schedule for participating labs to aid in developing the process to identify QA samples, as well as to determine when QC waves (see *Subtask 2.1.1*) are held. The contractor is responsible for:

- contacting the labs with notification of which samples were selected;
- details on where the primary labs are to ship the samples for re-identification; and
- arranging for and covering the cost of shipping samples to the QC taxonomists from the primary labs (including returning the samples to the primary labs).

SubTask 2.1.1 Benthic QC Waves

The QA process shall be staggered in three waves so that selected samples can be sent for re-identification shortly after they are identified by the primary lab throughout the field season.

Subtask 2.2 Benthic QC Sample Assignment

The contractor shall provide the QC taxonomists with assigned samples to re-identify the samples following the protocols as described in the appropriate LOM and QAPP. It is expected that entire samples shall be shipped to one QC taxonomist/taxonomy lab. The primary taxonomists/taxonomy labs shall not be required to sort different types of organisms to send to different taxonomists.

SubTask 2.2.1 Benthic QC Sample Blind Identification

The QC taxonomists shall not receive the results from the primary lab identifications, as the re-identification is done blindly.

SubTask 2.2.2 Benthic QC Photo Documentation

If necessary, the QC taxonomist may take photos (as described in the LOM) of particular organisms that can be used in reconciliation discussions.

Subtask 2.3 Benthic Sample QC Reconciliation Teleconferences

At the completion of each wave of re-identification, the contractor shall schedule teleconference calls with relevant primary labs and QC taxonomists, to go over the results, reconcile the data and apply corrective actions to the dataset. If practical, the calls should be set up in advance to facilitate availability of all necessary taxonomists. The calls shall be held as soon as possible following completion of QC identifications so that reconciliation actions can be addressed in samples already identified as well as upcoming identifications.

SubTask 2.3.1 Benthic Sample QC Reconciliation Spreadsheet

In advance of the teleconference, the contractor shall provide an excel spreadsheet to attendees that includes (but is not limited to) primary lab information, sample ID, primary and QC counts, agreements vs disagreements, percent taxonomic disagreement (PTD), percent difference in enumeration (PDE) and percent taxonomic completeness (PTC). Photos may also be provided in advance to facilitate discussions. The contractor shall work with the TOCOR in advance of the first call to discuss what shall be included in the excel spreadsheet.

SubTask 2.3.2 Benthic Sample QC Reconciliation Discussions

During the reconciliation calls, disagreements will be discussed and resolved. The contractor shall be prepared to recalculate PTD and PDE based on taxonomic changes recommended during the reconciliation discussions and provide those new estimates to attendees before the conclusion of the call. These recalculations do not constitute a change to the primary labs data (for the QC samples, the labs must make those changes and submit to the contractor (see Task 2.4; Subtask 2.4.1); for changes in the more complete dataset, labs must submit those to EPA), but will provide valuable information on whether the recommended actions will result in meeting the QAPP objectives.

Subtask 2.4 Benthic Sample QC Reconciliation Call Summary and Recommendations

Within two to four business days of the call, the contractor shall provide the TOCOR and all meeting participants with a concise summary of the call, including identification of problematic taxa, important points to note, a list of recommended actions for revisions and PTD/PDE results both before and after reconciliation.

SubTask 2.4.1 Benthic QC Update

Once all updated database files are received from the primary labs and QC taxonomists, the contractor shall recalculate PTD and PDE results and send to the TOCOR within five to ten business days.

Subtask 2.5 Benthic Sample QC Status Update

The contractor shall provide the TOCOR with a list of labs that have or have not submitted updated files via email, before the start of the next wave of reconciliation calls.

Subtask 2.6 Benthic Sample QC Final Data

Upon completion of the QA process, the contractor shall provide final project data (per format agreed upon) to TOCOR according to procedures in the QAPP and using the standardized data template and naming conventions. The contractor shall include a final summary report (per format agreed upon) providing a list of all recommended actions for taxonomic revisions and details on the overall process as part of the final project report, including the original and revised PTD and PDE calculations.

Subtask 2.7 Benthic Sample QC Notifications

The contractor shall respond to requests from EPA as to status of QA process completion. The contractor shall notify the TOCOR immediately upon knowledge of incidents. If needed, contractor must respond to corrective actions according to technical collaboration from the TOCOR.

Task 2. Deliverables

Task	Sub-Task	Deliverable	Due
2	2.1	Copy of contractors proposed QA process, schedule and list of identified QC taxonomists.	20 days of receipt of TO
2	2.2	Complete list of samples assigned to QC taxonomists	Monthly, starting October 2019 (Base Period) - Monthly starting October 2019 until all QC samples are assigned. Monthly, starting October 2020 (Option Period 1)

Task	Sub-Task	Deliverable	Due
			- Monthly starting October 2020 until all QC samples are assigned.
2	2.3	Copy of reconciliation conference call schedule, and results summary spreadsheet	Monthly - Initial schedule and schedule updates Results summary – prior to each call
2	2.4	Summary of conference calls and recommendations	Within two to four working days of conference call
2	2.4.1	Recalculate PTD and PDE and update spreadsheet	Within five to ten working days of receipt of updated lab databases
2	2.5	Provide status reports on labs providing updated files	At least one week before the next wave of reconciliation calls
2	2.6	Provide draft data/report and final data/report to TOCOR	Draft: -By early summer 2020 for NRSA or per technical collaboration (Base Period); and -By early summer 2021 for NCCA or by technical collaboration (Option Period 1) Final: -By end of the Base Period of performance for NRSA; and -By end of Option Period 1 for NCCA
2	2.7	Notify TOCOR immediately when problems or issues arise.	Immediately upon knowledge of incident

Task 3. Proficiency Test Samples (Contract PWS Section 2, Task Area 2)

Subtask 3.1 Proficiency Test Samples Process

At multiple times (or "waves") during the laboratory (lab) processing window, the contractor shall send full sets of proficiency test (PT) samples to each laboratory conducting algal toxin analyses. The EPA QA Coordinator or Lab Coordinator will provide the QC contractor with the point of contacts for all participating laboratories.

For the NCCA, the national contract lab conducting algal toxin analysis will receive two sets of estuarine (salinity 22 psu) PT samples and two sets of Great Lakes (freshwater) samples in each wave. One set shall be for microcystins and one shall be for cylindrospermopsin. State labs shall receive one set of either estuarine or freshwater PT samples, depending on whether the state is collecting samples in estuaries (two state labs) or the Great Lakes (one state lab). The national algal toxin laboratory will receive a total three waves of PT samples in Option Period 1. See Table below.

PT Sample Distribution Basic Plan						
	Wave 1 (Base Period)		**Wave 2 (Base Period)**		**Wave 3 (Option Period 1)**	
	Estuarine (salinity 22 psu)	Great Lakes (freshwater)	Estuarine (salinity 22 psu)	Great Lakes (freshwater)	Estuarine (salinity 22 psu)	Great Lakes (freshwater)
National Lab	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples
Two Estuarine States	5 microcystin and 5 cylindrospermopsin PT samples	N/A	N/A	N/A	N/A	N/A
One Great Lake State	N/A	5 microcystin and 5 cylindrospermopsin PT samples	N/A	N/A	N/A	N/A

The contractor shall work with the TOCOR and the NRSA and NCCA Laboratory Coordinators to ensure that PT samples are sent at the appropriate time (beginning, middle and end of sample processing).

The contractor shall provide a total of 5 PT samples of different concentrations in each wave of algal toxin analysis performance testing for each analyte. These different concentrations should cover the expected range of algal toxin concentrations found in the environmental samples.

The QC contractor shall provide the first wave of PT samples for the national algal toxin lab to analyze them with or near the first set of field-collected samples (during the Base Period). The contractor shall provide the second wave to be analyzed midsummer (during the Base Period). A third wave shall be provided to be analyzed with or near the final batch of samples (in Option Period 1). Because most state laboratories will have relatively few samples that can be analyzed using a single kit, the QC contractor will send only one wave to each state laboratory (during the Base Period).

Each laboratory will analyze the QC samples following the same procedures used for the field-collected samples as described in the LOM. The EPA QA Coordinator will provide the results to the contractor. The contractor shall compare results from each lab to the expected concentration and assess patterns in the data (e.g., one laboratory being consistently higher or lower than all others). If a significant problem is noted, the contractor shall alert the TOCOR immediately upon knowledge of the incident. Otherwise, based upon the contractor's evaluation of PT sample results, the EPA QA Coordinator may request additional information from one or more laboratories about any deviations from the method or unique laboratory practices that might account for differences. With this additional information, the EPA QA Coordinator will determine an appropriate course of action, which may include written questions from the TOCOR to the QC contractor about the results.

Subtask 3.2 Proficiency Test Samples Report

Based on the results, the contractor shall provide a report (per format agreed upon) to EPA for each of the individual indicators and for each lab within two weeks of receiving the sample results that identifies differences in the achieved results from expected, whether those differences are within the precision and/or accuracy expectations for the method, any potential problems or concerns, and recommendations.

Task 3 Deliverables

Task	Sub-Task	Deliverable	Due
3	3.1	PT samples to labs	Per communication with TOCOR
3	3.1	Notification of significant issues from results comparison	Immediately upon knowledge of incident
3	3.2	PT Reports	Within two weeks of receipt of results from EPA

VI. ACCEPTANCE CRITERIA (Contract PWS Section 3)

The Contractor shall prepare high quality deliverables that are reproducible and transparent. Additional requirements specific to this TO are as follows: Electronic deliverables must be in an original file format that can be supported by EPA after the end of the Period of Performance of the TO. The standard office software at EPA is MS Office Suite.

Task Order Summary of all Deliverables and Schedule

Task	Sub-Task	Deliverable	Due
1	1.1	Communication/Kick-off call	TBD
1	1.2	Regular reporting schedule	TBD
1	1.3	Progress and financial reports	Monthly
1	1.4	Coordination and notifications	Immediately upon knowledge of incident
2	2.1	Copy of contractors proposed QA process, schedule and list of identified QC taxonomists.	20 days of receipt of TO
2	2.2	Complete list of samples assigned to QC taxonomists	Monthly, starting October 2019 (Base Period) - Monthly starting October 2019 until all QC samples are assigned. Monthly, starting October 2020 (Option Period 1) - Monthly starting October 2020 until all QC samples are assigned.
2	2.3	Copy of reconciliation conference call schedule, and results summary spreadsheet	Monthly - Initial schedule and schedule updates Results summary – prior to each call
2	2.4	Summary of conference calls and recommendations	Within two to four working days of conference call
2	2.4.1	Recalculate PTD and PDE and update spreadsheet	Within five to ten working days of receipt of updated lab databases
2	2.5	Provide status reports on labs providing updated files	At least one week before the next wave of reconciliation calls
2	2.6	Provide draft data/report and final data/report to TOCOR	Draft: -By early summer 2020 for NRSA or per technical collaboration (Base Period); and -By early summer 2021 for NCCA or by technical

Task	Sub-Task	Deliverable	Due
			collaboration (Option Period 1) Final: -By end of the Base Period of performance for NRSA; and -By end of Option Period 1 for NCCA
2	2.7	Notify TOCOR immediately when problems or issues arise.	Immediately upon knowledge of incident
3	3.1	PT samples to labs	Per communication with TOCOR
3	3.1	Notification of significant issues from results comparison	Immediately upon knowledge of incident
3	3.2	PT Reports	Within two weeks of receipt of results from EPA

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE 1 OF PAGES 3

2. AMENDMENT/MODIFICATION NO. P00001

3. EFFECTIVE DATE See Block 16C

4. REQUISITION/PURCHASE REQ. NO. PR-OW-20-00700

5. PROJECT NO. *(If applicable)*

6. ISSUED BY CODE CAD

CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

TETRA TECH, INC.
Attn: John Hochheimer
10306 EATON PL STE 340
FAIRFAX VA 22030

CODE 198549560 FACILITY CODE

(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

x 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-17-031
68HERC19F0301

10B. DATED *(SEE ITEM 13)* 09/19/2019

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended , by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted ; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted , such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER *(Specify type of modification and authority)* Bilateral Agreement - No Cost/Price PoP Extension - Due to unanticipated COVID-19 field and lab delays

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

DUNS Number: 198549560
TOCOR: Richard Mitchell Max Expire Date: 10/31/2021
LIST OF CHANGES:
Reason for Modification: Other Administrative Action - No Cost/Price PoP Extension - Due to unanticipated COVID-19 field and lab delays (see attached Amend 1 PWS).
Period Of Performance End Date changed from 18-SEP-21 to 31-OCT-21
Maximum Potential Expiration Date changed to : 10/31/2021

CHANGES FOR LINE ITEM NUMBER: 1
End Date changed from 18-SEP-20 to 31-OCT-20
(FULLY FUNDED BASE LINE ITEM)
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*

16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
Andrea Dehne

15B. CONTRACTOR/OFFEROR
(Signature of person authorized to sign)

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA
ELECTRONIC SIGNATURE
(Signature of Contracting Officer)

16C. DATE SIGNED 08/31/2020

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Delivery Date changed from 09/18/2020 to 10/31/2020 CHANGES FOR LINE ITEM NUMBER: 1A End Date changed from 18-SEP-21 to 31-OCT-20 (UNEXERCISED OPTION LINE ITEM) CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Delivery Date changed from 09/18/2020 to 10/31/2020 CHANGES FOR LINE ITEM NUMBER: 2 Start Date changed from 19-SEP-20 to 01-NOV-20 End Date changed from 18-SEP-21 to 31-OCT-21 (UNEXERCISED OPTION LINE ITEM) CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Delivery Date changed from 09/18/2021 to 10/31/2021 CHANGES FOR LINE ITEM NUMBER: 2B Start Date changed from 19-SEP-19 to 01-NOV-20 End Date changed from 18-SEP-21 to 31-OCT-21 (UNEXERCISED OPTION LINE ITEM) CHANGES FOR DELIVERY LOCATION: OW-OWOW-AWPD-MB Delivery Date changed from 09/18/2021 to 10/31/2021 Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 10/31/2021 Delivery-Invoice Payment Schedule shall not exceed a frequency greater than once a month and 90% of the task order price. Acceptance for invoicing is based on deliverable approval by the TOCOR. For efficient processing IAW FAR clause 52.232-32, performance based payment invoicing amounts will not be submitted until the TOCOR provides deliverable approval. The TOCOR will notify Tetra Tech within 14 days of submission of a deliverable of EPAs intention to approve or Continued ...				

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	disapprove. TOCOR: Richard Mitchell/(202)566-0644/mitchell.richard@epa.gov ALTOCOR: Hugh Sullivan/(202)564-1763/sullivan.hugh@epa.gov				

PERFORMANCE WORK STATEMENT
Contract EP-C-17-031
PR-OW-19-00423
SOL 68HERC19R0074
TO #68HE0C19F0301

Amendment 1

I. Title: NRSA 2019 & NCCA 2020: External Benthic QA and Proficiency Test QC Support

EPA Short title: NRSA & NCCA QA/QC

II. Period of Performance: Date of TO Award through 24 months followingaward:
Base Period: September 19, 2019 to ~~September 18, 2020~~ October 31, 2020
Option Period 1: ~~September 19, 2020 to September 18, 2021~~ November 1, 2020 – October 31, 2021

III. TOCOR:
Richard Mitchell
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
WRAPD
1200 Pennsylvania Avenue, NW
Washington, DC 20460
202-566-0644
mitchell.richard@epa.gov

Alternate TOCOR
Hugh Sullivan
U.S. Environmental Protection Agency
Office of Wetlands, Oceans and Watersheds
WRAPD
1200 Pennsylvania Avenue, NW
Washington, DC 20460
202-564-1763
sullivan.hugh@epa.gov

IV. BACKGROUND
The U.S. EPA Office of Water and Office of Research and Development, states and numerous other partners are conducting a survey of the rivers and streams and of the nation's coasts to provide national and regional data on the condition of these waters. These assessments, the National Rivers and Streams Assessment (NRSA) and the National Coastal Condition Assessment (NCCA), are part of a program called the National Aquatic Resource Surveys (NARS). NARS is designed to use a probability-based network that will provide statistically valid information about water resources with known confidence. NRSA field crews will collect samples from just over 1100 sites including benthic samples from each site over the course of 2019. NCCA field crews will collect samples from approximately 1000 sites including collection of benthic samples during 2020.

V. Objectives

The primary objective of this task order (TO) is to conduct laboratory work and quality assurance of samples collected as part of the NARS, specifically the NRSA and the NCCA process to achieve the requirements as defined in the appropriate Quality Assurance Project Plan (QAPP) and Laboratory Operations Manual (LOM). For NRSA documents, see https://www.epa.gov/national-aquatic-resource-surveys/manuals-used-national-aquatic-resource-surveys#National Rivers & Streams Assessment. This work will support the assessment of condition in U.S. rivers, streams and coastal waters as well as assessments of risk. The types of support required for this project includes conducting an independent taxonomic re-identification of 10% of the NRSA and NCCA samples collected in the summer of 2019 and 2020 respectively, including the reconciliation process described in Task 2 of the PWS. The Base Period shall include a quantity range between 90 and 125 benthic samples for NRSA. The Base Period shall also support sending proficiency test (PT) samples (70) per Task 3. Option Period 1 shall include a quantity range between 75 and 120 benthic samples for NCCA. Option Period 1 shall also support sending proficiency test (PT) samples (20) per Task 3.

During the Base Period, the contractor shall receive a quantity range between 90 and 125 NRSA benthic samples for re-identification and inclusion in the reconciliation process (Task 2). During the Base Period, the contractor shall also implement Task 3 for two waves of PT samples to the NCCA national lab and one wave for the three state labs (see Subtask 3.1 for more information).

During Option Period 1, the contractor shall receive a quantity range between 75 and 120 NCCA benthic samples for reidentification and inclusion in the reconciliation process (Task 2). During Option Period 1, the contactor shall also implement Task 3 for one additional wave of PT samples for the NCCA national contract lab.

VI. Quality Assurance (Contract PWS Section 5)

The contractor shall address the QA requirements of this TO through a combination of the NRSA 2018-2019 QAPP and LOM; and the NCCA 2020 QAPP and LOM which document how quality assurance and quality control will be applied to the collection and use of environmental data and/or survey information for this TO. see https://www.epa.gov/national-aquatic-resource-surveys/manuals-used-national-aquatic-resource-surveys#National Rivers & Streams Assessment.

Any project specific quality assurance issues shall be reported in the monthly progress reports as specified under Task 1. The contractor shall document relevant QA activities in any deliverable (e.g., reports). All QA documentation prepared under the TO shall be considered non-proprietary. The contractor shall provide a signed review sheet (in the front of the QAPP) indicating the QAPP and LOM have been read and shall be followed by all personnel participating in this TO.

The contractor shall submit relevant QA documentation as requested by the TOCOR. The contractor shall permit a QA review of laboratory and/or data entry documents and procedures by an authorized agent of EPA at any time during the performance period with advanced notification given. The contractor shall retain original records, such as laboratory notebooks, for a minimum of three years from the date the final report is published on-line by the EPA. Unless the TOCOR grants an exception, the contractor shall not publish findings based upon work conducted under this task order. This restriction shall remain in effect until EPA provides public access to the data.

SCOPE OF WORK

Task 1: Communication, Prepare Monthly Progress and Financial Reports, Coordination and Notification

SubTask 1.1 Communication/Kickoff Call
The Contractor shall contact the EPA TOCOR and schedule a kickoff project meeting.

SubTask 1.2 Communication and development of a regular reporting schedule
The Contractor shall establish communication with the EPA TOCOR and develop a regular reporting schedule throughout the period of the TO.

SubTask 1.3 Monthly Progress and Financial Reports
Submit and prepare monthly progress and financial reports in accordance. The monthly progress report shall include project status, expenditures to date, unexpected problems or concerns, corrective actions, lessons learned, QA/QC activities, and next steps.

SubTask 1.4 Coordination and notification
This task requires coordination with other organizations and therefore it is particularly important that the Contractor shall notify the EPA TOCOR of issues, problems, questions, or delays as soon as they become apparent or if they are anticipated.

Task 1. Deliverables

Task	SubTask	Deliverable	Due
1	1.1	Communication/Kick-off call	TBD
1	1.2	Regular reporting schedule	TBD
1	1.3	Progress and financial reports	Monthly
1	1.4	Coordination and notifications	Immediately upon knowledge of incident

Task 2: Benthic Independent Taxonomic Quality Control Process (Contract PWS Section 2, Task Area 2)
During the Base Period, Task 2 shall be implemented for a quantity range between 90 and 125 NRSA benthic samples. Five labs are conducting NRSA benthic analyses: the national contract and three state labs (Oklahoma, North Carolina and Wisconsin). For Option Period 1, this Task shall be implemented for a quantity range between 75 and 120 NCCA benthic samples. The samples shall include benthics collected in U.S. estuaries and the Great Lakes. Samples will be processed by two national labs and four state labs.

SubTask 2.1 Benthic QC Preparation
The contractor shall assign a project lead with expertise in benthic QC processes, taxonomy and bioassessments to set up a process to select 10% of the identified benthic samples to be re-identified by independent taxonomists. The contractor shall identify independent taxonomists to complete the re-identification work.

The contractor shall set up a process to identify which processed samples will be selected from the primary national and state benthic lab for re-identification. The TOCOR will provide the contractor with a sampling processing schedule for participating labs to aid in developing the process to identify QA samples, as well as to determine when QC waves (see *Subtask 2.1.1*) are held. The contractor is responsible for:

- contacting the labs with notification of which samples were selected;
- details on where the primary labs are to ship the samples for re-identification; and
- arranging for and covering the cost of shipping samples to the QC taxonomists from the primary labs (including returning the samples to the primary labs).

SubTask 2.1.1 Benthic QC Waves

The QA process shall be staggered in three waves so that selected samples can be sent for re-identification shortly after they are identified by the primary lab throughout the field season.

Subtask 2.2 Benthic QC Sample Assignment

The contractor shall provide the QC taxonomists with assigned samples to re-identify the samples following the protocols as described in the appropriate LOM and QAPP. It is expected that entire samples shall be shipped to one QC taxonomist/taxonomy lab. The primary taxonomists/taxonomy labs shall not be required to sort different types of organisms to send to different taxonomists.

SubTask 2.2.1 Benthic QC Sample Blind Identification

The QC taxonomists shall not receive the results from the primary lab identifications, as the re-identification is done blindly.

SubTask 2.2.2 Benthic QC Photo Documentation

If necessary, the QC taxonomist may take photos (as described in the LOM) of particular organisms that can be used in reconciliation discussions.

Subtask 2.3 Benthic Sample QC Reconciliation Teleconferences

Due to Covid-19 state laboratories that were collaborating with the contractor to set up the reconciliation calls have been delayed in getting samples shipped to the independent QC taxonomist laboratory, thus delaying the re-identification of samples and scheduling of reconciliation calls. Some of the states involved, Oklahoma and Wisconsin, however this project is still ongoing with both California and North Carolina, and by providing an extension of the base period of performance this shall allow adequate time to completed Subtask 2.3 and all subsequent subtasks under Task 2.

At the completion of each wave of re-identification, the contractor shall schedule teleconference calls with relevant primary labs and QC taxonomists, to go over the results, reconcile the data and apply corrective actions to the dataset. If practical, the calls should be set up in advance to facilitate availability of all necessary taxonomists. The calls shall be held as soon as possible following completion of QC identifications so that reconciliation actions can be addressed in samples already identified as well as upcoming identifications.

SubTask 2.3.1 Benthic Sample QC Reconciliation Spreadsheet

In advance of the teleconference, the contractor shall provide an excel spreadsheet to attendees that includes (but is not limited to) primary lab information, sample ID, primary and QC counts, agreements vs disagreements, percent taxonomic disagreement (PTD), percent difference in enumeration (PDE) and percent taxonomic completeness (PTC). Photos may also be provided in advance to facilitate discussions. The contractor shall work with the TOCOR in advance of the first call to discuss what shall be included in the excel spreadsheet.

SubTask 2.3.2 Benthic Sample QC Reconciliation Discussions

During the reconciliation calls, disagreements will be discussed and resolved. The contractor shall be prepared to recalculate PTD and PDE based on taxonomic changes recommended during the reconciliation discussions and provide those new estimates to attendees before the conclusion of the call. These recalculations do not constitute a change to the primary labs data (for the QC samples, the labs must make those changes and submit to the contractor (see Task 2.4; Subtask 2.4.1); for changes in the more complete dataset, labs must submit those to EPA), but will provide valuable information on whether the recommended actions will result in meeting the QAPP objectives.

Subtask 2.4 Benthic Sample QC Reconciliation Call Summary and Recommendations

Within two to four business days of the call, the contractor shall provide the TOCOR and all meeting participants with a concise summary of the call, including identification of problematic taxa, important points to note, a list of recommended actions for revisions and PTD/PDE results both before and after reconciliation.

SubTask 2.4.1 Benthic QC Update

Once all updated database files are received from the primary labs and QC taxonomists, the contractor shall recalculate PTD and PDE results and send to the TOCOR within five to ten business days.

Subtask 2.5 Benthic Sample QC Status Update

The contractor shall provide the TOCOR with a list of labs that have or have not submitted updated files via email, before the start of the next wave of reconciliation calls.

Subtask 2.6 Benthic Sample QC Final Data

Upon completion of the QA process, the contractor shall provide final project data (per format agreed upon) to TOCOR according to procedures in the QAPP and using the standardized data template and naming conventions. The contractor shall include a final summary report (per format agreed upon) providing a list of all recommended actions for taxonomic revisions and details on the overall process as part of the final project report, including the original and revised PTD and PDE calculations.

Subtask 2.7 Benthic Sample QC Notifications

The contractor shall respond to requests from EPA as to status of QA process completion. The contractor shall notify the TOCOR immediately upon knowledge of incidents. If needed, contractor must respond to corrective actions according to technical collaboration from the TOCOR.

Task 2. Deliverables

Task	Sub-Task	Deliverable	Due
2	2.1	Copy of contractors proposed QA process, schedule and list of identified QC taxonomists.	20 days of receipt of TO

2	2.2	Complete list of samples assigned to QC taxonomists	Monthly, starting October 2019 (Base Period) - Monthly starting October 2019 until all QC samples are assigned. Monthly, starting November 2020 (Option Period 1)

Task	Sub-Task	Deliverable	Due
			- Monthly starting November 2020 until all QC samples are assigned.
2	2.3	Copy of reconciliation conference call schedule, and results summary spreadsheet	Monthly - Initial schedule and schedule updates Results summary – prior to each Call
2	2.4	Summary of conference calls and recommendations	Within two to four working days of conference call
2	2.4.1	Recalculate PTD and PDE and update spreadsheet	Within five to ten working days of receipt of updated lab databases
2	2.5	Provide status reports on labs providing updated files	At least one week before the next wave of reconciliation calls
2	2.6	Provide draft data/report and final data/report to TOCOR	Draft: -By early summer 2020 for NRSA or per technical collaboration (Base Period); and -By early summer 2021 for NCCA or by technical collaboration (Option Period 1) Final: -By end of the Base Period of performance for NRSA; and -By end of Option Period 1 for NCCA
2	2.7	Notify TOCOR immediately when problems or issues arise.	Immediately upon knowledge of incident

Task 3. Proficiency Test Samples (Contract PWS Section 2, Task Area 2)

Subtask 3.1 Proficiency Test Samples Process

At multiple times (or "waves") during the laboratory (lab) processing window, the contractor shall send full sets of proficiency test (PT) samples to each laboratory conducting algal toxin analyses. The EPA QA Coordinator or Lab Coordinator will provide the QC contractor with the point of contacts for all participating laboratories.

For the NCCA, the national contract lab conducting algal toxin analysis will receive two sets of estuarine (salinity 22 psu) PT samples and two sets of Great Lakes (freshwater) samples in each wave. One set shall be for microcystins and one shall be for cylindrospermopsin. State labs shall receive one set of either estuarine or freshwater PT samples, depending on whether the state is collecting samples in estuaries (two state labs) or the Great Lakes (one state lab). The national algal toxin laboratory will receive a total three waves of PT samples in Option Period 1. See Table below.

PT Sample Distribution Basic Plan						
	Wave 1 (Base Period)		**Wave 2 (Base Period)**		**Wave 3 (Option Period 1)**	
	Estuarine (salinity 22 psu)	Great Lakes (freshwater)	Estuarine (salinity 22 psu)	Great Lakes (freshwater)	Estuarine (salinity 22 psu)	Great Lakes (freshwater)
National Lab	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples	5 microcystin and 5 cylindrospermopsin PT samples
Two Estuarine States	5 microcystin and 5 cylindrospermopsin PT samples	N/A	N/A	N/A	N/A	N/A
One Great Lake State	N/A	5 microcystin and 5 cylindrospermopsin PT samples	N/A	N/A	N/A	N/A

The contractor shall work with the TOCOR and the NRSA and NCCA Laboratory Coordinators to ensure that PT samples are sent at the appropriate time (beginning, middle and end of sample processing).

The contractor shall provide a total of 5 PT samples of different concentrations in each wave of algal toxin analysis performance testing for each analyte. These different concentrations should cover the expected range of algal toxin concentrations found in the environmental samples.

The QC contractor shall provide the first wave of PT samples for the national algal toxin lab to analyze them with or near the first set of field-collected samples (during the Base Period). The contractor shall provide the second wave to be analyzed midsummer (during the Base Period). A third wave shall be provided to be analyzed with or near the final batch of samples (in Option Period 1). Because most state laboratories will have relatively few samples that can be analyzed using a single kit, the QC contractor will send only one wave to each state laboratory (during the Base Period).

Each laboratory will analyze the QC samples following the same procedures used for the field-collected samples as described in the LOM. The EPA QA Coordinator will provide the results to the contractor. The contractor shall compare results from each lab to the expected concentration and assess patterns in the data (e.g., one laboratory being consistently higher or lower than all others). If a significant problem is noted, the contractor shall alert the TOCOR immediately upon knowledge of the incident. Otherwise, based upon the contractor's evaluation of PT sample results, the EPA QA Coordinator may request additional information from one or more laboratories about any deviations from the method or unique laboratory practices that might account for differences. With this additional information, the EPA QA Coordinator will determine an appropriate course of action, which may include written questions from the TOCOR to the QC contractor about the results.

Subtask 3.2 Proficiency Test Samples Report

Based on the results, the contractor shall provide a report (per format agreed upon) to EPA for each of the individual indicators and for each lab within two weeks of receiving the sample results that identifies differences in the achieved results from expected, whether those differences are within the precision and/or accuracy expectations for the method, any potential problems or concerns, and recommendations.

Task 3 Deliverables

Task	Sub-Task	Deliverable	Due
3	3.1	PT samples to labs	Per communication with TOCOR
3	3.1	Notification of significant issues from results comparison	Immediately upon knowledge of incident
3	3.2	PT Reports	Within two weeks of receipt of results from EPA

VI. ACCEPTANCE CRITERIA (Contract PWS Section 3)

The Contractor shall prepare high quality deliverables that are reproducible and transparent. Additional requirements specific to this TO are as follows: Electronic deliverables must be in an original file format that can be supported by EPA after the end of the Period of Performance of the TO. The standard office software at EPA is MS Office Suite.

Task Order Summary of all Deliverables and Schedule

Task	Sub-Task	Deliverable	Due
1	1.1	Communication/Kick-off call	TBD
1	1.2	Regular reporting schedule	TBD
1	1.3	Progress and financial reports	Monthly
1	1.4	Coordination and notifications	Immediately upon knowledge of Incident
2	2.1	Copy of contractors proposed QA process, schedule and list of identified QC taxonomists.	20 days of receipt of TO
2	2.2	Complete list of samples assigned to QC taxonomists	Monthly, starting October 2019 (Base Period) - Monthly starting October 2019 until all QC samples are assigned. Monthly, starting November 2020 (Option Period 1) - Monthly starting November 2020 until all QC samples are assigned.
2	2.3	Copy of reconciliation conference call schedule, and results summary spreadsheet	Monthly - Initial schedule and schedule updates Results summary – prior to each call
2	2.4	Summary of conference calls and recommendations	Within two to four working days of conference call
2	2.4.1	Recalculate PTD and PDE and update spreadsheet	Within five to ten working days of receipt of updated lab Databases
2	2.5	Provide status reports on labs providing updated files	At least one week before the next wave of reconciliation calls
2	2.6	Provide draft data/report and final data/report to TOCOR	Draft: -By early summer 2020 for NRSA or per technical collaboration (Base Period); and -By early summer 2021 for NCCA or by technical

Task	Sub-Task	Deliverable	Due
			collaboration (Option Period 1) Final: -By end of the Base Period of performance for NRSA; and -By end of Option Period 1 for NCCA
2	2.7	Notify TOCOR immediately when problems or issues arise.	Immediately upon knowledge of incident
3	3.1	PT samples to labs	Per communication with TOCOR
3	3.1	Notification of significant issues from results comparison	Immediately upon knowledge of incident
3	3.2	PT Reports	Within two weeks of receipt of results from EPA

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE

PAGE 1 OF PAGES 3

2. AMENDMENT/MODIFICATION NO. P00002

3. EFFECTIVE DATE See Block 16C

4. REQUISITION/PURCHASE REQ. NO. PR-OW-20-00807

5. PROJECT NO. *(If applicable)*

6. ISSUED BY CODE CAD

CAD
US Environmental Protection Agency
26 West Martin Luther King Drive
Mail Code: W136
Cincinnati OH 45268-0001

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*

TETRA TECH, INC.
Attn: John Hochheimer
10306 EATON PL STE 340
FAIRFAX VA 22030

CODE 198549560 FACILITY CODE

(x) 9A. AMENDMENT OF SOLICITATION NO.

9B. DATED *(SEE ITEM 11)*

x 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-17-031
68HERC19F0301

10B. DATED *(SEE ITEM 13)* 09/19/2019

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended , by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted ; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted , such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)* Net Increase: $120,550.00
See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER *(Specify type of modification and authority)* Bilateral Agreement - Option Exercise, Funding and Section 889 Clause Incorporation

E. IMPORTANT: Contractor ☐ is not ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

DUNS Number: 198549560
TOCOR: Richard Mitchell Max Expire Date: 10/31/2021
LIST OF CHANGES:
Reason for Modification: Other Administrative Action - Option Exercise and incorporate the attached EPA blanket administrative modification signed by Raoul Scott on July 30, 2020.
All other terms and conditions remain unchanged.
Total Amount for this Modification: $0.00
New Total Amount for this Version: $120,550.00
New Total Amount for this Award: $372,295.00
Obligated Amount for this Modification: $120,550.00
New Total Obligated Amount for this Award: $286,000.00
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*

16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*
Andrea Dehne

15B. CONTRACTOR/OFFEROR
(Signature of person authorized to sign)

15C. DATE SIGNED

16B. UNITED STATES OF AMERICA
ELECTRONIC SIGNATURE
(Signature of Contracting Officer)

16C. DATE SIGNED 09/29/2020

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	CHANGES FOR LINE ITEM NUMBER: 2 Obligated Amount for this Modification: $120,550.00 Exercised option NEW ACCOUNTING CODE ADDED: Account code: 20-21-B-87FM-000BD4-2505-2087ME4028-001 Beginning FiscalYear 20 Ending Fiscal Year 21 Fund (Appropriation) B Budget Organization 87FM Program (PRC) 000BD4 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 2087ME4028-001 Amount: $120,550.00 Subject To Funding: N Payment Address: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 Period of Performance: 09/19/2019 to 10/31/2021 Delivery-Invoice Payment Schedule shall not exceed a frequency greater than once a month and 90% of the task order price. Acceptance for invoicing is based on deliverable approval by the TOCOR. For efficient processing IAW FAR clause 52.232-32, performance based payment invoicing amounts will not be submitted until the TOCOR provides deliverable approval. The TOCOR will notify Tetra Tech within 14 days of submission of Continued ...				

NAME OF OFFEROR OR CONTRACTOR
TETRA TECH, INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	a deliverable of EPAs intention to approve or disapprove. TOCOR: Richard Mitchell/(202)566-0644/mitchell.richard@epa.gov ALTOCOR: Hugh Sullivan/(202)564-1763/sullivan.hugh@epa.gov				

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES

2. AMENDMENT/MODIFICATION NUMBER	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQUISITION NUMBER	5. PROJECT NUMBER *(If applicable)*
	08/13/2020		

6. ISSUED BY CODE

Raoul D. Scott, Director
OMS/ARM/OAS/Policy, Training and Oversight Division
US Environmental Protection Agency, Mail Code 3802R
1200 Pennsylvania Avenue, NW
Washington, DC 20004

7. ADMINISTERED BY *(If other than Item 6)* CODE

8. NAME AND ADDRESS OF CONTRACTOR *(Number, street, county, State and ZIP Code)*

To All EPA Contractors

CODE FACILITY CODE

(X) 9A. AMENDMENT OF SOLICITATION NUMBER

☐ 9B. DATED *(SEE ITEM 11)*

☒ 10A. MODIFICATION OF CONTRACT/ORDER NUMBER

To all EPA Contracts and Orders

10B. DATED *(SEE ITEM 13)*

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NUMBER AS DESCRIBED IN ITEM 14.

CHECK ONE	
☐	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NUMBER IN ITEM 10A.
☒	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation data, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
☐	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
☐	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☒ is not ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION *(Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

This contract/order is being modified in accordance with the applicability instructions in interim FAR Case 2019-009, and FAR 4.2105, requiring contracting officers to include FAR clause 52.204-25, Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

See attached for the full text version of FAR 52.204-25. Contractor Acknowledgment of receipt required.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
		Raoul D. Scott, Director Policy, Training and Oversight Division	
15B. CONTRACTOR/OFFEROR	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED
(Signature of person authorized to sign)		RAOUL SCOTT Digitally signed by RAOUL SCOTT Date: 2020.07.30 11:40:17 -04'00' *(Signature of Contracting Officer)*	

Previous edition unusable

STANDARD FORM 30 (REV. 11/2016)
Prescribed by GSA FAR (48 CFR) 53.243

52.204-25 Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment.

As prescribed in 4.2105(b) and in the applicability instructions in interim FAR Case 2019-009, insert the following clause:

Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment (Aug 2020)

(a) *Definitions.* As used in this clause—

Backhaul means intermediate links between the core network, or backbone network, and the small subnetworks at the edge of the network (e.g., connecting cell phones/towers to the core telephone network). Backhaul can be wireless (e.g., microwave) or wired (e.g., fiber optic, coaxial cable, Ethernet).

Covered foreign country means The People's Republic of China.

Covered telecommunications equipment or services means–

(1) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities);

(2) For the purpose of public safety, security of Government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities);

(3) Telecommunications or video surveillance services provided by such entities or using such equipment; or

(4) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Critical technology means–

(1) Defense articles or defense services included on the United States Munitions List set forth in the International Traffic in Arms Regulations under subchapter M of chapter I of title 22, Code of Federal Regulations;

(2) Items included on the Commerce Control List set forth in Supplement No. 1 to part 774 of the Export Administration Regulations under subchapter C of chapter VII of title 15, Code of Federal Regulations, and controlled-

(i) Pursuant to multilateral regimes, including for reasons relating to national security, chemical and biological weapons proliferation, nuclear nonproliferation, or missile technology; or

(ii) For reasons relating to regional stability or surreptitious listening;

(3) Specially designed and prepared nuclear equipment, parts and components, materials, software, and technology covered by part 810 of title 10, Code of Federal Regulations (relating to assistance to foreign atomic energy activities);

(4) Nuclear facilities, equipment, and material covered by part 110 of title 10, Code of Federal Regulations (relating to export and import of nuclear equipment and material);

(5) Select agents and toxins covered by part 331 of title 7, Code of Federal Regulations, part 121 of title 9 of such Code, or part 73 of title 42 of such Code; or

(6) Emerging and foundational technologies controlled pursuant to section 1758 of the Export Control Reform Act of 2018 (50 U.S.C. 4817).

Interconnection arrangements means arrangements governing the physical connection of two or more networks to allow the use of another's network to hand off traffic where it is ultimately delivered (e.g., connection of a customer of telephone provider A to a customer of telephone company B) or sharing data and other information resources.

Reasonable inquiry means an inquiry designed to uncover any information in the entity's possession about the identity of the producer or provider of covered telecommunications equipment or services used by the entity that excludes the need to include an internal or third-party audit.

Roaming means cellular communications services (e.g., voice, video, data) received from a visited network when unable to connect to the facilities of the home network either because signal coverage is too weak or because traffic is too high.

Substantial or essential component means any component necessary for the proper function or performance of a piece of equipment, system, or service.

(b) Prohibition. (1) Section 889(a)(1)(A) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2019, from procuring or obtaining, or extending or renewing a contract to procure or obtain, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. The Contractor is prohibited from providing to the Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104.

(2) Section 889(a)(1)(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232) prohibits the head of an executive agency on or after August 13, 2020, from entering into a contract, or extending or renewing a contract, with an entity that uses any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception at paragraph (c) of this clause applies or the covered telecommunication equipment or services are covered by a waiver described in FAR 4.2104. This prohibition applies to the use of covered telecommunications equipment or services, regardless of whether that use is in performance of work under a Federal contract.

(c) *Exceptions.* This clause does not prohibit contractors from providing—

(1) A service that connects to the facilities of a third-party, such as backhaul, roaming, or interconnection arrangements; or

(2) Telecommunications equipment that cannot route or redirect user data traffic or permit visibility into any user data or packets that such equipment transmits or otherwise handles.

(d) Reporting requirement.

(1) In the event the Contractor identifies covered telecommunications equipment or services used as a substantial or essential component of any system, or as critical technology as part of any system, during contract performance, or the Contractor is notified of such by a subcontractor at any tier or by any other source, the Contractor shall report the information in paragraph (d)(2) of this clause to the Contracting Officer, unless elsewhere in this contract are established procedures for reporting the information; in the case of the Department of Defense, the Contractor shall report to the website at https://dibnet.dod.mil. For indefinite delivery contracts, the Contractor shall report to the Contracting Officer for the indefinite delivery contract and the Contracting Officer(s) for any affected order or, in the case of the Department of Defense, identify both the indefinite delivery contract and any affected orders in the report provided at https://dibnet.dod.mil.

(2) The Contractor shall report the following information pursuant to paragraph (d)(1) of this clause

(i) Within one business day from the date of such identification or notification: the contract number; the order number(s), if applicable; supplier name; supplier unique entity identifier (if known); supplier Commercial and Government Entity (CAGE) code (if known); brand; model number (original equipment manufacturer number, manufacturer part number, or wholesaler number); item description; and any readily available information about mitigation actions undertaken or recommended.

(ii) Within 10 business days of submitting the information in paragraph (d)(2)(i) of this clause: any further available information about mitigation actions undertaken or recommended. In addition, the Contractor shall describe the efforts it undertook to prevent use or submission of covered telecommunications equipment or services, and any additional efforts that will be incorporated to prevent future use or submission of covered telecommunications equipment or services.

(e) *Subcontracts.* The Contractor shall insert the substance of this clause, including this paragraph (e) and excluding paragraph (b)(2), in all subcontracts and other contractual instruments, including subcontracts for the acquisition of commercial items.

(End of clause)