WORK ORDER NO. 7

West Regional Wastewater Treatment Facility
Industrial Wastewater Pretreatment Local Limits Evaluation

This Work Order Number No. 7 is entered into as of this 5th day of April, 2022, pursuant to that certain Continuing Contract Agreement, dated April 17, 2018, renewed and amended as of May 18, 2021 (collectively referred to as the "Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Tetra Tech, Inc. ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit B (Fee Schedule), attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Section IV of the Agreement (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.4 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:

By: _____

Print Name: _____

Title: _____

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

By: _____
Peter O'Bryan, Chairman

BCC Approved Date: _____

Attest: Jeffrey R. Smith, Clerk of Court and Comptroller

By: _____
Deputy Clerk

Approved: _____
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency: _____
Dylan T. Reingold, County Attorney

TETRA TECH

March 7, 2022

Via email: rmeckes@ircgov.com

Mr. Richard Meckes
Indian River County Utilities Department
1801 27th Street
Vero Beach, FL 32960-3388

Subject: Work Order #7
Proposal to Indian River County for the West Regional WWTF
INDUSTRIAL WASTEWATER PRETREATMENT LOCAL LIMITS EVALUATION

Tt # 200BP Indian River County

Dear Mr. Meckes:

Tetra Tech, Inc. (Tetra Tech) is pleased to provide Indian River County Department of Utility Services (IRCDUS) with this proposal for services to assist in the preparation of the West Regional Wastewater Treatment Facility (WWTF) Industrial Wastewater Pretreatment Local Limits Evaluation.

I. BACKGROUND

The IRCDUS owns and operates the West Regional WWTF, a 6.0 million gallons per day (MGD) annual average daily flow (AADF) domestic WWTF. The WWTF consists of two influent mechanical bar screens, two grit removal units, two fermentation basins, two 1st anoxic basins, four aeration basins, two 2nd anoxic basins, two reaeration basins, four secondary clarifiers, four tertiary filters, and six chlorine contact chambers. The WWTF has sodium hydroxide and alum chemical feed facilities. Also, the WWTF has a rotary drum thickener and an aerated sludge holding tank for processing biosolids.

Effluent from the WWTF is disposed through a 4.0 MGD AADF Surface Water Discharge, D-001, from the created wetland, R-001; a 6.97 MGD AADF slow-rate public access Land Application R-002 which provides reclaimed water for irrigation public access reuse within the IRCDUS's service area; and a 0.1 MGD AADF Land Application R-003 rapid infiltration basin (RIBs).

The WWTF is operating under current Florida Department of Environmental Protection (FDEP) wastewater permit number FL0041637. The WWTF treats wastewater from both domestic and nondomestic sources. In an effort to control discharges from nondomestic sources, the County implements an Industrial Pretreatment Program (IPP) that regulates the wastewater discharged from nondomestic users to reduce and eliminate impacts these discharges may have on the WWTF. As part of the permit and IPP, IRCDUS is required to periodically evaluate and update the local limits. In addition, the County is requesting that a general evaluation of their existing IPP.

As part of the Local Limits evaluation Tetra tech will prepare two work products (draft and final) as follows for review and approval by the IRCDUS:

Tetra Tech, Inc.
201 E. Pine Street, Suite 1000, Orlando, FL 32801
Tel 407.839.3955 Fax 407.839.3790 www.tetratech.com

- Plan of Study
- Technical Evaluation / Report

The Plan of Study and Technical Evaluation / Report will be submitted in the format as required by the FDEP.

For the IPP evaluation Tetra tech will prepare two work products (draft and final) as follows for review and approval by the IRCDUS:

- IPP Evaluation Technical Memorandum (TM)

II. SCOPE OF WORK

IRCDUS has requested that Tetra Tech provide engineering services to prepare local limits analysis per the Continuing Contract Agreement for Engineering Services Dated April 17th, 2018. Tetra Tech's proposal to provide the requested engineering services is presented in this scope of work.

Task 1 – Project Meetings and Project Management

Tetra Tech will prepare for, conduct and prepare minutes for meetings associated with this project, including the following:

a. Kick Off Meeting
b. Two (2) Coordination/Progress Meetings

Project Management includes, but is not limited to: organizing and coordinating the project team; organizing meetings; and managing the project budget, schedule and preparation of updates.

Task 2 – Review Existing Data

Tetra Tech will review the IRCDUS's information, including but not limited to:

a. Existing Local Limits
b. WWTF FDEP Permit
c. Minimum of one set of priority pollutant scan results
d. Monthly Operating Reports for the past five (5) years
e. List of Industrial Users
f. Basis of Design for the WWTF

Task 3 – Plan of Study

Tetra Tech will develop the Plan of Study in accordance with the U.S. EPA's Local Limit Development Guidance (EPA 833R-04-002A) and Chapter 4 of the Florida Guidance Manual for Pretreatment Programs. The Plan of Study will include the:

- Pollutants of Concern (POCs)
- Sampling Plan
- Local Limits Development Schedule

A POC is any pollutant that might be discharged to the WWTF in sufficient amounts to pass through or interfere with the unit processes, contaminate the facility's residuals or effluent, be problematic for the collection system, or jeopardize wastewater operator health. The established local limits apply at the point where the wastewater is discharged to the WWTF.

The purpose of the Plan of Study is to determine the characteristics of the IRCDUS's wastewater and biosolids. Tetra Tech will prepare a Plan of Study containing a sampling plan to collect samples of the influent, effluent, appropriate background locations, septage, and the biosolids for the WWTF.

The Draft Plan of Study will be submitted to the IRCDUS for review and then submitted to the FDEP for review and approval. This scope includes responding up to two (2) rounds of comments from the FDEP regarding the Plan of Study. After FDEP approval, Tetra Tech will review the Plan of Study with IRCDUS staff.

Task 4 – Sampling and Analysis Program

The IRCDUS will conduct the sampling program for the wastewater, septage, effluent and biosolids. Depending on the influent sampling location, the side streams from the facilities operations may also require sampling. The IRCDUS will perform and pay for all sample collection and laboratory analysis as required for the sampling program. Tetra Tech will coordinate with the IRCDUS staff and review the results when received from the IRCDUS or their selected laboratory.

A. Wastewater Sampling

For evaluating the local limits, samples will need to be flow proportioned or time composited and will be outlined in the Plan of Study. Grab samples will need to be collected from the influent and effluent at the WWTF.

B. Septage Sampling

Septage sampling will be conducted to account for the loading in the local limits. Details of the septage sampling will be confirmed during the Kick-off meeting.

C. Biosolids Sampling

The biosolids sampling technique for demonstrating compliance is specified in the biosolids regulations stipulated in 40 CFR 503 (Biosolids Rule). The IRCDUS will need to collect several aliquots from randomly selected locations within the biosolids mass and

the aliquots will be composited to form a single mass for analysis. Biosolids sampling is proposed as follows:

- Four grab samples collected within an 8-hour period and composited.
- Sampling period is proposed over 2 consecutive days.

Task 5 – Calculate Local Limits

Tetra Tech will calculate the Local Limits for the WWTF. At a minimum, local limits will be evaluated for the following pollutants:

- Ammonia-N
- Arsenic
- BOD
- Cadmium
- Chromium
- Copper
- Cyanide
- Lead
- Mercury
- Nickel
- Selenium
- Silver
- TP
- TSS
- Zinc
- Fats, Oils & Grease

Tetra Tech may also consider additional pollutants as requested by IRCDUS based on local concerns and the results of the priority pollutant scan.

Tetra Tech will perform a technical evaluation of the local limits using the Local Limit Information and Development System (LLIDS 2020) program from the FDEP and the current version of the US EPA Guidance Manual on the Development Implementation of Local Limitations under the Pretreatment Program (Local Limits Development Guidance, July 2004). The local limits calculations will be performed based on current flows and the design flow of the WWTF.

Tetra Tech will assess current conditions to determine if existing Maximum Allowable Headworks Limits (MAHLs) should be recalculated or reallocated, or if additional local limits should be developed for the program. Tetra Tech will evaluate existing data and will then calculate the MAHLs for currently regulated POCs and determine MAHLs for each new POC. Based on the MAHLs for POCs at the WWTF, Tetra Tech will develop local limits using the uniform allocation

method or industrial contribution method and assist the IRCDUS in adopting the revised local limits. If the industrial contribution method is used, additional information on the pollutants discharged by each significant industrial user (SIU) will need to be provided by the IRCDUS.

Developing Local Limits will involve the calculation of the maximum allowable headworks loadings based on the following criteria:

- NPDES Permit Limits,
- Pass-through based on reuse for irrigation/sandy soils,
- Treatment inhibition for nitrification and activated biosolids, and
- Biosolids quality for land application.

These criteria will be applied in accordance with current IPP guidelines and requirements of the FDEP and the USEPA. For the compatible pollutants (BOD, TSS, Total Phosphorous and Ammonia-N), a basis of design criteria will be considered in addition to the pass-through criteria. Average background loadings and a safety factor will be deducted from the calculated headworks loadings prior to being converted into concentration-based limits via the selected allocation method.

Task 6 – Recommendation on Feasibility of Local Limits

Tetra Tech will compare the calculated local limits for the WWTF to select the lower value as the value calculated for the evaluation. These values will then be compared to the existing local limit and Tetra Tech will present the results to the IRCDUS for selection of the final local limit value.

Task 7 – Report

The efforts of Tasks 1 through 6 above will be summarized in a Local Limits Technical Evaluation Report. A Draft Report will be prepared and submitted to the IRCDUS for review and comment. Upon receipt of comments, the Final Report will be prepared and submitted electronically to FDEP. Tetra Tech will deliver five (5) paper copies and an electronic copy in PDF format of the Final Report to the IRCDUS.

Task 8 – IPP Evaluation

Tetra Tech will retain the services of Brown and Caldwell (BC) to conduct an evaluation of the County's existing IPP. This will consist of both offsite/virtual and onsite tasks that will assess compliance with federal, state, and local pretreatment regulations. The offsite support will include the assessment of the following:

- NPDES Permit
- FDEP-issued Pretreatment Program approval documents (if applicable)
- Sewer Use Ordinance/Pretreatment Ordinance
- Enforcement Response Plan
- Implementation Manual (if applicable)
- Industrial User Permits

- Permit Applications

The onsite evaluation will consist of three parts: an interview of IPP staff, file review of three significant industrial user (SIU) files, and site visits to three SIUs. This will include two BC staff onsite for up to two days. The file review will include the following:

- SIU self-monitoring reports
- SIU inspection reports
- County compliance sampling
- Enforcement actions (if applicable)

BC will compile all findings of both the offsite/virtual and onsite evaluations into a draft IPP Evaluation Technical Memorandum (TM). The TM will describe any significant findings and deficiencies. It will also include recommendations for enhancing/improving the program based on industry best practices.

III. INFORMATION AND SERVICES TO BE PROVIDED BY IRCDUS

- IRCDUS will provide all equipment and materials for collecting all samples and be responsible for analyzing all samples.
- IRCDUS will provide historical IRCDUS Local Limits information and reports.
- IRCDUS will provide WRFs wastewater flow and quality information from the monthly operating reports.
- IRCDUS will provide WRFs priority pollutant scan information.

IV. PROJECT SCHEDULE

The approximate duration noted for each task is based on our current understanding and best estimates of time required to perform the basic services.

Project Milestones/Deliverables	Completion Weeks from NTP
Notice to Proceed (NTP)	
Project Kick-Off Meeting	2 weeks
Draft Plan of Study (POS) to City	6 weeks
POS to FDEP	8 weeks
POS FDEP Approval	12 weeks
Receive Analysis Results	16 weeks
Draft Local Limits to City	24 weeks
Local Limits Report to FDEP	28 weeks
IPP Evaluation TM	28 weeks

V. COMPENSATION

The proposed total lump sum compensation for the Scope of Services described in Tasks 1 thru 8 is **$71,188**. Attachment A presents a detailed breakdown of the estimated compensation for the Scope of Services.

Task	Phase	Compensation
1	Project Management	$ 7,395
2	Review Existing Data	$ 859
3	Plan of Study	$12,128
4	Sampling and Analysis	$4,654
5	Calculate Local Limits	$7,958
6	Recommendation on Local Limits	$927
7	Report	$14,390
8	IPP Evaluation	$ 22,877
Total Lump Sum		**$71,188**

Tetra Tech looks forward to working with you on this project. We are available to discuss our approach with you in detail at your convenience. Should you have any questions regarding this proposal, please contact me at (407) 480-3970.

Sincerely,

Brenda L Keenan, P.E.
Project Manager

BLK/ab/WRWWTF Local Limit Evaluation.doc

C: Jon Fox, P.E., Tetra Tech

Price Proposal

Local Limits Evaluation

Pretreatment Program Local Limits Evaluation

Submitted to: Indian River County Department of Uti

Contract Type: Lump Sum

Labor Plan

5 Resource

	Billing Rate--->	202.63	130.34	99.78	118.05	87.49
Project Phases / Tasks	**Total Labor Hrs**	Project Manager (Brenda Keenan)	Project Engineer 1 (Tiffany Miller)	Engineer 2 (Maria Arenas)	Sr CADD Designer 1 (Russ Matthews)	Project Administrator (Sarah Donovan)
	396	88	72	186	14	36
Task 1 – Project Management	**42**	**28**	**6**	**6**	**-**	**2**
Kickoff Meeting	10	2	3	3		2
Coordination Mtg. (1)	8	2	3	3		
Management	24	24				
Other Direct Costs	-					
Task 2 – Review Existing Data	**8**		**2**	**6**		
Task 3 – Plan of Study	**102**	**14**	**14**	**46**	**14**	**14**
Draft to City	70	6	12	32	12	8
Review Mtg.	14	6		6		2
Draft to FDEP	8		2	4		2
Respond to FDEP RAI	10	2		4	2	2
Task 4 – Sampling and Analysis Program	**38**	**6**	**8**	**24**	**-**	**-**
Coordination with City Staff	10	2		8		
Review Results	28	4	8	16		
Task 5 – Calculate Local Limits	**66**	**8**	**18**	**40**	**-**	**-**
Technical Evaluation of Results	56	8	16	32		
Compare to Existing conditions	10		2	8		
Task 6 – Recommendation of Citywide Local Limits	**6**	**2**	**4**			
Task 7 – Report	**122**	**18**	**20**	**64**	**-**	**20**
Prepare Draft Report	84	8	16	48		12
Review Mtg.	14	6		6		2
Draft to FDEP	10		2	4		4
Respond to FDEP RAI	14	4	2	6		2
Task 8 - IPP Evaluation	**12**	**12**	**-**	**-**	**-**	**-**
Brown & Caldwell Services	12	12				

Price Summary / Totals

Total Price	**71,188**

Pricing by Resource

Labor	Subs	ODCs	Task Pricing Totals
50,578	20,445	165	**71,188**
7,230	**-**	**165**	**7,395**
1,271			1,271
1,096			1,096
4,863			4,863
		165	165
859			**859**
12,128	**-**	**-**	**12,128**
8,089			8,089
1,989			1,989
835			835
1,215			1,215
4,654	**-**	**-**	**4,654**
1,204			1,204
3,450			3,450
7,958	**-**	**-**	**7,958**
6,899			6,899
1,059			1,059
927			**927**
14,390	**-**	**-**	**14,390**
9,546			9,546
1,989			1,989
1,010			1,010
1,845			1,845
2,432	**20,445**	**-**	**22,877**
2,432	20,445		22,877

Totals	**396**	**88**	**72**	**186**	**14**	**36**	**50,578**	**20,445**	**165**	**71,188**