

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE J	PAGE OF PAGES 1 14
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 13-Feb-2002	4. REQUISITION/PURCHASE REQ. NO. W32CS5-1337-1671	5. PROJECT NO.(If applicable)	
6. ISSUED BY USA ENGINEER DISTRICT, JACKSONVILLE 400 WEST BAY STREET CESAJ-CT (ROOM 867) JACKSONVILLE FL 32202-4412	CODE DACW17	7. ADMINISTERED BY (If other than item 6) CODE See Item 6		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. DACW17-02-R-0008	
		X	9B. DATED (SEE ITEM 11) 30-Jan-2002	
			10A. MOD. OF CONTRACT/ORDER NO.	
CODE			10B. DATED (SEE ITEM 13)	
FACILITY CODE				
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input type="checkbox"/> is extended, <input checked="" type="checkbox"/> is not extended.				
Offer 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 <u>2</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram 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 telegram or letter, provided each telegram or letter 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 NO. AS DESCRIBED IN ITEM 14.				
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 date, 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 <input type="checkbox"/> is not, <input type="checkbox"/> 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.) DACW17-02-R-0008 IS AMENDED TO REPLACE THE EXISTING SOW WITH THE ATTACHED SOW IN ITS ENTIRETY. THE SPECIFIC AREAS AFFECTED ARE AS FOLLOWS: PARAGRAPH 2.2.4 WATER QUALITY ANALYSIS IS REVISED AND REPLACED IN ITS ENTIRETY. PARAGRAPH 4.2.1 INFLUENT WATER QUALITY CONDITIONS HAS BEEN REVISED BY ADDING TABLES 3.b AND 3.c. ADDENDUM TO CLAUSE 52.212-1 INSTRUCTIONS TO OFFERORS - COMMERCIAL ITEMS, SECTION (4). THE SUBMISSION REQUIREMENT FOR PILOT TREATMENT PLANT HAS BEEN REVISED AS SHOWN. *** ADDITIONALLY, ATTACHED ARE THE RESPONSES FOR QUESTIONS RECEIVED CONCERNING THIS SOLICITATION. THEY ARE PROVIDED AS INFORMATION ONLY.*** NOTE: THE DATE AND TIME FOR RECEIPT OF PROPOSALS IS NOT CHANGED. 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)		
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED 13-Feb-2002	

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

Changes in Section SF 1449

**STATEMENT OF WORK
(SOW)**

**Pilot Studies To Demonstrate Water Treatment Technology For Surface Water And ASR-
Recovered Water Treatment**

1.0 INTRODUCTION**1.1.1 Organization:**

1.1.1 Identification: United States Army Corps of Engineers, Engineering Division, Geotechnical Branch, Environment Section, Jacksonville District, 400 West Bay Street, Jacksonville, Florida 32232-0019

1.1.2 Mission: To provide surface water treatment performance and cost data to demonstrate the feasibility of Aquifer Storage and Recovery (ASR) technology for the ASR Projects.

1.2 Background and Objective:

1.2.1 Background: As part of the Comprehensive Everglades Restoration Program (CERP), the US Army Corps of Engineers (Government) in conjunction with its local partner the South Florida Water Management District (SFWMD) have initiated three Aquifer Storage and Recovery (ASR) Pilot projects. Results from these projects will determine if a full-scale ASR project, that includes over 300 ASR wells, will be constructed in south Florida as part of the CERP. The three ASR Pilot Projects (Lake Okeechobee, Western Hillsboro Basin, and Caloosahatchee River) will each require the construction of at least one-5 million gallon per day (mgd) surface water treatment plant. These treatment plants will be designed to treat surface water prior to injection into groundwater storage zones and to treat recovered water prior to release into surface water bodies. The regulatory standards that govern the level of water treatment necessary to store and recover surface waters in the lower Floridan Aquifer have not been clearly established at this time. The USACE and SFWMD intend to investigate the feasibility of treating ASR water to full Primary and Secondary Standards as well as investigate lesser treatment levels such as Primary Standards without disinfection. The SFWMD and the Government have issued Project Management Plans outlining the different tasks involved with conducting the ASR Projects. These plans are provided on the web at <http://www.evergladesplan.org>. Subtask 4.4 of the Lake Okeechobee ASR Project Management Plan summarizes the requirements for treatment alternatives pilot testing. Under this subtask different water treatment technologies will be considered for treating both surface water and recovered water.

1.2.2 Objective: The Government is seeking firms interested in demonstrating surface water and ASR-recovered water treatment technologies. The demonstration unit must have a treated water flow capacity of at least 10 gallons per minute (gpm). The treatment technology must be scalable to at least 5 million gallons per day (mgd) and capable of treating South Florida surface water to standards necessary to inject water into aquifer storage wells. Under this solicitation, the Government intends to issue

multiple awards to contractors capable of demonstrating: **Option 1**, potable water treatment technologies that meet all Primary and Secondary Drinking Water Standards, and/or **Option 2**, potable water treatment technologies that meet all Primary Drinking Water Standards except the pathogen removal and disinfection residual requirements but including the turbidity standard of 0.3 NTU (95% of time). The purpose of Option 2 is to demonstrate low cost treatment trains that provide substantial pathogen removal without chemical or UV disinfection processes.

The demonstration studies will last from 30 to approximately 60 days with continuous operation status for the large majority of the testing time. At the conclusion of pilot plant testing, the Government will evaluate the performance of the various demonstration efforts in order to select technologies for full-scale implementation at multiple 5 mgd treatment capacity plants.

Selected treatment technology may be incorporated into the design/construction of three or more 5-mgd potable water treatment plants sited at the ASR Projects located near Lake Okeechobee. Design of the first 5 mgd plant is expected to begin after September 2002.

1.3 References: The following background data and references are to be considered by the contractor when developing the technical proposal and performing the tasks:

- ❑ Chapter 62-550, Florida Administrative Code (F.A.C.), Drinking Water Standards, Monitoring, and Reporting
- ❑ Chapter 62-555, F.A.C., Permitting and Construction of Public Water Systems
- ❑ The promulgated Stage 1 D/DBPR (Disinfection / Disinfection By-product Rule and IESWTR (Interim Enhanced Surface Water Treatment Rule)
- ❑ Associated guidance manuals for the Stage 1 D/DBPR and IESWTR including: (1) Alternate Disinfectants & Oxidants Guidance Manual, (2) Enhanced Coagulation Guidance Manual, (3) Simultaneous Compliance Guidance Manual, (4) Implementation Guidance Manual, (5) Turbidity Compliance Guidance Manual, and (6) Disinfection Profiling and Benchmarking Guidance Manual.

2.0 TECHNICAL REQUIREMENTS

2.1 General Information

2.1.1 Disinfection Requirements: The demonstrated technologies must be piloted as complete treatment trains including an appropriate disinfection method. Under Option 1 of this RFP, Primary and Secondary Drinking Water Standards include disinfection byproduct (DBPs) and Ct (residual disinfectant concentration multiplied by actual detention time) requirements for potable treatment of surface waters. The contractor must demonstrate compliance with the total trihalomethane (TTHM) and five haloacetic acids (HAA5) maximum contaminant levels as required by the Stage 1 Disinfectants/Disinfection By-Product Rule (Stage 1 D/DBPR) while providing an appropriate Ct value to meet the *Giardia* and virus removal/inactivation requirements of the Interim Enhanced Surface Water Treatment Rule (IESWTR). Under Option 2 of this RFP, pathogen removal and Ct requirements contained within the Primary Drinking Water Standards are not included as part of the final treatment quality goals. However, the 0.3 NTU (95% of time) turbidity standard will apply. Pathogen removal rates will be measured and considered when evaluating Option 2 treatment process results.

2.1.2 Declorination Requirement: Contractors who elect to use chlorinated chemicals as part of the disinfection process shall dechlorinate effluent prior to discharge. The dechlorinated effluent shall meet the Class 1 Surface Water Standard for chlorine concentration. The contractor shall measure and report the residual chlorine concentration downstream of the dechlorination process on a daily basis.

2.1.3 Evaluation of Pilot Study Results: Demonstrated treatment technologies will be evaluated based upon operational criteria such as power consumption, chemical consumption, labor requirements, necessary routine equipment replacement needs, and routine maintenance needs; final treated water quality and ability to consistently meet Option 1 or Option 2 treatment goals; the quantity, quality, and degree of difficulty for disposal of all generated treatment residuals; full-scale capital construction project costs including engineering and administration; time to construct the full-scale facilities; and commercial availability/history of use for the proposed technologies. Among other items, Option 2 demonstrations will be evaluated by the degree of micro-organism removal provided. Technologies will also be evaluated for certain non-quantifiable factors including potential impact to environment, ability to permit, perceived difficulty of operation, and ability to be modified to meet potential, more-stringent regulatory standards in the future.

2.2 Task Description

2.2.1 Pre-Mobilization Submittals: Within 14 days of notice of award, the contractor shall provide a description of the testing equipment (including process diagram), mobilization plan, power requirements, area requirements, site safety plan, QA/QC plan, waste disposal plan, and operational study plan to the Government. This Government will review this information during the mobilization phase to ensure that the Contractor intends to perform as stated in his proposal.

2.2.2 Site Mobilization and Process Stabilization: Within 30 days of notice of award, the contractor shall mobilize equipment at the designated site. Mobilization includes all equipment, supplies, and personnel described in the Contractor's response to this RFP. Contractor shall provide and install all necessary primary and ancillary treatment equipment and structures (demonstration treatment plant hereafter referenced as the "plant") necessary to provide complete treatment of the raw water to the specified finished water quality including disinfection. Contractors are responsible for providing electric power to operate all of their supplied pilot testing equipment. Electrical connections shall be done by a licensed electrician, if required by local codes. The Contractor shall supply his own pump system to supply raw water to his plant. The raw water intake shall be located no more than 10 feet from the designated location (shown in Figure 2). The raw water intake shall collect water from a depth of at least 2-feet below the water surface. The contractor shall be responsible for preventing vegetation, sediment, or other debris from clogging the intake. The Contractor shall install calibrated flow meters to allow monitoring of raw water use, finished water production, residual waste streams, and recycled streams. The Contractor shall install a calibrated electrical meter or other appropriate power-measuring device to monitor electrical usage of the Contractor's supplied plant. The Contractor shall have a fresh supply (unopened containers) of the required process chemicals. The contractor shall notify the Government or its representative of the pending delivery of chemicals to the site. Mobilization includes 15 day of plant operations to stabilize the process.

2.2.3 Pilot Testing: The Contractor shall operate the plant from 30 to 60 continuous days in a manner commensurate with the Contractor's description of the pilot study (as provided in the response to this solicitation). In the event that the Contractor must vary from their stated design or operational criteria in order to meet the required water quality, the Contractor shall provide verbal notification within 24 hours and a written description of the changes within 72 hours stating specific reasons for the deviations. The

demonstration period is expected to be May 15, 2002 through July 15, 2002. The plant shall be operational more than 85% of the time as determined by a review of power usage and flow records. The plant shall be manned by a trained and qualified operator for at least 8-hours per day, seven days per week. Operation of the plant is the sole responsibility of the Contractor and the Contractor shall provide additional operational coverage as they deem necessary to meet the required percent operational time. The operator shall maintain an "operators log" on a daily basis to record information to include: hours of operation, duration and causes for any downtime, all process stream flow rates (raw, finished, recycled, and residual), all process stream pressures, chemical dosing and usage rates, operational events including backwash events, volumes and characteristics of any wasted (residuals) streams, and field-obtained water quality data for the process streams including pH, turbidity, conductivity, color, UV-254, temperature, and other routine monitoring parameters. The Operator's Log shall also contain a copy of any laboratory analysis for the process streams including all residuals streams. Contractor shall assist the Government or the Government's representative in the periodic sampling of the finished water to determine compliance with all specified water quality parameter standards. The Contractor is guaranteed a minimum 30 days demonstration period as long as performance objectives are met. Additional demonstration time will be compensated at the daily or monthly rate, depending upon the length of time that the demonstration period exceeds the initial 30 day demonstration period.

2.2.4 Water Quality Analysis: The Government or its Agent will collect samples of the product water twice during the testing period to test for an extended list of water quality constituents. During each sampling event, split samples will be collected by the Government for analysis. One of the sample sets will be sent to a Government laboratory for analysis (contracted for outside of this scope) and the other half of the split samples shall be analyzed by a FDEP certified laboratory sub-contracted by the Contractor. The parameters to be analyzed include the full primary and secondary water quality parameters as well as nutrients (total phosphorus, dissolved phosphorus, total nitrogen, TKN, and ammonia nitrogen). The primary standards can be found in Chapter 62-550.310 of the Florida Administrative Code. The secondary standards can be found in Chapter 62-550.320 of the Florida Administrative Code. The primary and secondary parameters can be located at <http://www.dep.state.fl.us/legal/legaldocuments/rules/drinkingwater/62-550.pdf> and <http://www.dep.state.fl.us/legal/legaldocuments/rules/drinkingwater/62-560%20Tables%20.pdf>.

The Government will coordinate the sampling events with the Contractor. The Contractor shall assist the Government with the sample collection and arrange for analysis of there half of the spilt samples.

2.2.5 Site Demobilization: The Contractor shall remove all equipment, process residuals, and restore all disturbed surfaces to pre-mobilization conditions at the conclusion of the demonstration period. Said construction and residuals disposal shall be performed in accordance with all applicable regulations, codes, and statues and shall not interfere with the operations of other Contractors.

2.2.6 Final Report: Within 14 days of demobilization, the Contractor shall submit a final report that summarizes applicability of the technology to the treatment objective as well as lessons learn. The report shall meet the standards as noted in Section 2.3 of this SOW.

2.2.7 Additional Demonstration Days: (Optional task): In the event that the Government wants to extend the testing period, the Contractor shall make his equipment and personnel available for up to an additional 50 days past the initial demonstration period. The Contractor shall continue to operate the pilot plant until notified by the contracting officer's representative. The offeror shall price this task on a daily rate basis . The Contractor will be notified at least 7 days in advance of a request for additional demonstration days.

2.3 Deliverables: All deliverables must meet professional standards and meet the requirements set forth in contractual documentation. The Contractor will be responsible for delivering all end items specified. A summary of the required reports is given in Table 1.

2.3.1 Process Chemicals: The Contractor will provide fresh supplies (unopened containers) of all required process chemicals prior to initiating the 60-day pilot study.

2.3.2 Chemical Delivery Invoices: The Contractor will provide a copy of shipping invoices for all process chemicals delivered for use during the pilot treatment study.

2.3.3 Daily Operator Log: The contractor will maintain a daily operator's log between the mobilization and de-mobilization phase of this project including the startup and calibration phase. A signed copy of the original log with a statement that all recorded events and data are true and accurate shall be provided at the conclusion of the pilot study. The operator's log will include the following information:

Process Measurements: At least twice-per day readings (or estimates when not directly measured including methodology of estimation) for: raw, finished, recycled and wasted water flows; power consumption, chemical dosing rates, and chemical usage summary.

Process Adjustments: All changes in operational or design criteria including flow rate, chemical feed rate, filtration pressure, or wasting rate will be noted with the effective time and date of the change.

Operation Downtime: The starting and ending time of all process downtime and an explanation for downtime.

Water Quality Measurements: At least twice per day (separated by a minimum of 6-hours in time) , sampling and analysis of raw and finished water shall be performed and recorded in the operator's log. The routine water quality parameters shall include, but not be limited to, turbidity, color, pH, temperature, UV-254, conductivity, and fecal coliform. For the disinfection process(es) disinfectant residual and detention time shall be recorded. Other required parameters shall include any water quality parameters or surrogate measurements critical to the operation of the primary treatment processes. Such an example would be streaming current for a chemical coagulation process.

2.3.4 Final Report: At the conclusion of the demonstration study, the Contractor shall prepare and submit a final report. This report will include:

1. a summary of the testing activity including downtime and significant operational or water quality excursions,
2. observations regarding necessary adjustments to operational criteria including chemical dosing, operating pressures, flow rates, recycle rates, filtration rates, loading rates, backwash frequency or duration, or other process operational conditions,
3. recommended operational and design criteria including redundancy/reliability recommendations for the full-scale implementation of the tested technology.
4. Summary statement of lessons learned during testing.

TABLE 1. SUMMARY OF REPORTS

Support Area	Title	Delivery Date
Management	Technical Proposal	Before contract award
Management	Cost proposal	Before contract award
Management	Pre-Mobilization Submittals	7 days after Notice of Award
Management	Chemical Invoices	Prior to start of pilot testing
Management	Operator's Daily Log	15 days after conclusion of pilot testing (daily log is to be kept on-site and available at all times for inspection by the Government).
Management	Final Report	15 days after conclusion of pilot testing

2.3.5 Criteria for Acceptance: Specific criteria for acceptance of deliverables will be as follows: Six copies of the final report and operator' daily log shall be provided to the Government at the conclusion of pilot testing. Results of daily water quality measurements shall be recorded in an electronic spreadsheet (Microsoft Excel compatible format). The final report shall also be provided in electronic form in either Adobe PDF or Microsoft Word formats.

2.3.6 Schedule: Table 2 contains the projected schedule for this project:

TABLE 2. PROJECT SCHEDULE

Activity	Date
Notice of Award	April 15, 2002
Pre-Mobilization Submittals	April 21, 2002
Govt. Approval of Submittals	April 30, 2002
Mobilization	May 15, 2002
Chemical Inventory / Invoices	May 15, 2002
Stabilization / Begin Pilot Testing	May 15 to 31, 2002
End Pilot Testing	July 30, 2002
Final Report Due	August 15, 2002

2.3.7 Delivery Instructions: Specific delivery instructions will be as follows: Deliverables shall be received by the Government POC (see Section 4.1 for contact information) on the dates posted above.

2.4 Expertise: The Contractor is responsible for providing personnel with expertise in the following areas:

2.4.1 Skills: Personnel assigned to this task must possess skills in the area of potable water treatment, potable water treatment operations, pilot plant or demonstration-scale treatment operations, and project management.

2.4.2 Functional Skills: Personnel must be capable of working independently in remote locations and with demonstrated working knowledge of potable water pilot plant or demonstration-scale equipment.

2.4.3 Key Personnel: The Contractor must identify key personnel in the technical proposal specifically including the plant operators. Contractor shall not substitute other personnel without the consent of Government unless the absence of the key personnel is beyond the control of the Contractor.

2.5 Materials: Materials and equipment are to be provided by the Contractor when essential to the task performance. The following items will be provided by the Contractor:

2.5.1 Pilot or Demonstration-Scale Treatment Plant: The Contractor will provide pilot or demonstration-scale treatment plant equipment with a minimum flow rate of 10 gallons per minute (gpm). Demonstration plants for conventional (rapid mono- or multi-media) filter technology must use a minimum of 4-inch diameter pilot units in order to minimize wall effects. Any demonstration units using spiral-wound or hollow fiber membrane elements must use 4-inch diameter (nominal) elements. The pilot or demonstration-scale treatment plant shall include all process units necessary to meet the **Option 1** or **Option 2** finished water quality criteria including disinfection for Option 1. The plant will include flow meters on the raw, finished, recycled, and waste stream pipes. The plant will include residual storage tanks. Plants with chlorine disinfection will be required to dechlorinate prior to discharge to surface waters.

2.5.2 Pumping and Piping: The Contractor shall provide and install all raw, finished, and wasting pump and piping systems. The raw water intake shall be placed within 10 feet of the location shown in Figure 2 at a depth of at least 2.5 feet below surface. The finished water discharge pipe shall cross the paved access road shown in Figure 2 to ensure that finished water drains into Lake Okeechobee. Discharge of finished water shall not cause or contribute to erosion of the levee sidebank. The Contractor shall be responsible for protecting his pipes from vehicle damage.

2.5.3 Utility Service: The contractor shall provide any portable, temporary or permanent utility service needed for the project. Utility service includes water, electric power and sanitary waste disposal facilities. The contractor shall contact and coordinate with the local utility company to procure necessary service, or make other arrangements as necessary. The contractor is advised that two single-phase 110 volt services (200 Amps each) are available for use at the site. Additionally, the capacity for three-phase power may be available from the overhead power lines if a temporary service drop is installed. If connection with the local electric power distribution line is not feasible, the contractor is expected to use other means, such as a mobile diesel-powered generator to provide electric power. All the electric power consumed by the contractor's water treatment operation shall pass through a kilowatt-hour meter. A licensed electrician shall make all electric power connections as required by code. The contractor shall also provide all the water and sanitary waste disposal facilities necessary for the project and project personnel.

2.5.4 Process Chemicals: The Contractor shall have a fresh supply of process chemicals delivered to the testing site at the start of the demonstration testing period. Copies of the delivery invoices shall be given to the Government prior to pilot testing. Prior to initiation of the continuous operation period, Contractor and Government will jointly agree on the volume of chemical inventory. Contractor will note in the Operator's Log the amount of chemicals used in the plant startup and calibration.

2.5.5 Measurement Equipment: The Contractor shall provide his own water quality measurement equipment. Verification of equipment calibration shall be provided to the Government.

2.5.6 Residuals Storage and Disposal: The Contractor shall provide his own residuals storage tanks and dispose of the residuals in a legal manner. Verification of legal residuals disposal shall be provided to the Government.

3.0 GOVERNMENT FURNISHED RESOURCES

3.1 General. The Contractor shall specifically identify in the task proposal the type, amount, and time frames for any government resources, excluding those listed below. The following resources will be provided by the client:

3.1.1 Facilities, Supplies, and Services. The Government will provide the following:

- a fenced area for all selected Contractors to locate their testing equipment. This common area will be graded, fenced and gated to allow for access by semi-trailer based equipment. Each selected contractor will be allotted an area no smaller than 60 ft by 50 ft to place and operate equipment.
- All permits necessary to site and operate pilot treatment plant equipment at the staging area. This may include NPDES and WQC permits. Contractor is responsible for any permits or agreements required to dispose of process residuals.

The Government, its partner, or agent, will analyze influent and effluent water samples as part of an independent quality assurance effort. The Government will analyze the raw and finished waters for the full primary/secondary drinking water quality criteria at least twice during the 30 to 60-day continuous operation period. The Government will collect at least one residual waste stream sample during the test. If a pilot plant has more than one waste stream, the USACE will collect separate samples of each individual waste stream. Contractor shall provide all necessary assistance for water quality sampling.

The Government will independently verify flow, electricity, and chemical consumption based upon the Contractor supplied flow and electricity measurement devices, chemical delivery invoices, and an inventory of unused chemicals at the completion of the pilot study.

In the case of the mobilization of multiple Contractors to the Government furnished testing site, each Contractor will be held fully responsible for damage caused to other Contractors' equipment.

3.1.2. Site Security: The Port Mayaca staging site is protected from trespassing by a fence and locked gate. No government employees are at the site from 10 PM to 6 AM. It is the sole responsibility of the Contractor to secure and protect his equipment from tampering and theft during the mobilization and testing phase of this contract.

4.0 ADMINISTRATIVE CONSIDERATIONS

4.1 Points of Contact: To be determined at time of contract award.

4.2 Place of Performance. Work is to be performed at a government furnished site located at Port Mayaca, Florida. Port Mayaca is the intersection of the St. Lucie Canal and Lake Okeechobee in Martin County.

4.2.1 Influent Water Quality Conditions: A summary of the available water quality data for the demonstration site is shown in Table 3. This data reflects the Government's knowledge of water quality at the demonstration site. The Government makes no claim as to its accuracy or representativeness. Respondents to this RFP should collect additional water quality data to support their proposal, as they deem necessary. Respondents to the RFP should also conduct all necessary investigations to support their proposals. Additional water quality data for Lake Okeechobee is available from FDEP for the surface water treatment plants at Belle Glade, Pahokee, and South Bay. Other water quality data can be obtained from the South Florida Water Management District.

TABLE 3a.. SUMMARY OF AVAILABLE WATER QUALITY AT DEMONSTRATION SITE

Parameter	Average	Standard Deviation	Median	High Value **	Number of Samples
Alkalinity (mg/l)	104	35	103	170	190
Color (cu)	55	42	47	170	187
D.O. (mg/l)	6.7	1.9	7	3 to 10	179
Field Cond. (umhos)	525	256	478	900	181
Hardness (mg/l)	148	43	147	250	34
Total Iron (mg/l)	.92	.94	.53	2.5	15
PH	7.8	.4	7.8	8.7	179
Temperature ©	25	4.5	25	20 to 33	180
Turbidity (NTU)	35	37	24	150	190
TDS (mg/l)	293	49	292	350	23
TSS (mg/l)	36	31	20	290	189
TOC (mg/l)	20			50	

** Data in this column is intended for calculation of Full-scale capital and operation cost as required in the Source Selection Plan.

The following Water Quality data was collected at the S-308C Structure from 1990 to present.

Negative concentrations indicate the non-detection of the analyte.

The USACE does not necessarily warrant this data as representative of water quality conditions that will be experienced during the Surface Water Pilot Treatment Test.

TABLE 3.b ADDENDUM TO WATER QUALITY DATA AT S-308C

Parameter	Average	Standard Deviation	High Value	Number of Samples
NITRATE+NITRITE-N mg/l	0.24	0.19	1.08	196
NITRITE-N mg/l	0.01	0.01	0.08	188
NITRATE-N mg/l	0.23	0.18	1.08	170
AMMONIA-N mg/l	0.06	0.09	0.70	190
KJELDAHL NITROGEN, TOTAL mg/l	1.59	0.74	7.96	199
PHOSPHATE, ORTHO AS P mg/l	0.07	0.09	0.98	189
PHOSPHATE, TOTAL AS P mg/l	0.18	0.12	1.09	207
SILICA mg/l	9.66	3.35	14.70	47
SODIUM mg/l	40.80	15.68	84.71	47

POTASSIUM mg/l	5.18	1.31	9.31	47
CALCIUM mg/l	41.27	16.86	86.10	47
MAGNESIUM mg/l	11.77	3.44	16.95	47
CHLORIDE mg/l	69.51	24.36	184.10	191
SULFATE mg/l	35.16	12.49	59.20	48
CARBON, DISSOLVED ORGANIC mg/l	21.62		21.62	1* August, 01
VOLATILE SUSPENDED SOLIDS mg/l	7.67	4.726	13	3
IRON, TOTAL ug/l	1038	937	4673	42
CADMIUM, TOTAL ug/l	0.25	0.29	1.418	41
COPPER, TOTAL ug/l	2.03	1.08	4.573	43
ARSENIC, TOTAL ug/l	1.50	0.54	2.3	41
LEAD, TOTAL ug/l	1.45	2.11	12.09	41
MERCURY, TOTAL ug/l	0.10	0.02	0.032	38
METH MERCURY, TOT ULTRATR ug/l	0.16	0.12	0.33	5
MERCURY, TOT, ULTRATRACE ug/l	12.05	8.31	24	5
ZINC, TOTAL ug/l	2.06	32.7	180	44

Table 3.c. Addendum to Water quality Data at S-308C)Pesticide samples collected July 01)

Parameter	
ATRAZINE DESISOPROPYL ug/L	0.014
2,4,5-T ug/L	-0.8
2,4,5-TP ug/L	-0.8
2,4-D ug/L	-0.8
ALACHLOR ug/L	-0.048
ALDRIN ug/L	-0.0021
AMETRYN ug/L	-0.0096
ATRAZINE ug/L	-0.0096
AZINPHOS METHYL ug/L	-0.019
BHC ALPHA ug/L	-0.0035
BHC BETA ug/L	-0.0019
BHC DELTA ug/L	-0.0021
BHC GAMMA ug/L	-0.00096
BROMACIL ug/L	0.51
BUTYLATE ug/L	-0.019
CARBOPHENOTHION ug/L	-0.015
CHLORDANE ug/L	-0.0096
CHLOROTHALONIL ug/L	-0.015
CHLORPYRIFOS ETHYL ug/L	-0.019
CHLORPYRIFOS METHYL ug/L	-0.0096
CYPERMETHRIN ug/L	-0.019
DDD-P,P' ug/L	-0.0046
DDE-P,P' ug/L	-0.0038
DDT-P,P' ug/L	-0.0038
DEMETON ug/L	-0.12
DIAZINON ug/L	-0.019
DICOFOL ug/L	-0.042

DIELDRIN ug/L	-0.0019
DISULFOTON ug/L	-0.019
ENDOSULFAN ALPHA ug/L	-0.0038
ENDOSULFAN BETA ug/L	-0.0038
ENDOSULFAN SULFATE ug/L	-0.0067
ENDRIN ug/L	-0.0019
ENDRIN ALDEHYDE ug/L	-0.0042
ETHION ug/L	-0.019
ETHOPROP ug/L	-0.019
FENAMIPHOS ug/L	-0.029
FONOFOS ug/L	-0.019
HEPTACHLOR ug/L	-0.0023
HEPTACHLOR EPOXIDE ug/L	-0.0019
HEXAZINONE ug/L	-0.019
MALATHION ug/L	-0.029
METALAXYL ug/L	-0.048
METHOXYCHLOR ug/L	-0.01
METOLACHLOR ug/L	-0.058
METRIBUZIN ug/L	-0.019
MEVINPHOS ug/L	-0.058
MIREX ug/L	-0.012
NALED ug/L	-0.077
NORFLURAZON ug/L	1
PARATHION ETHYL ug/L	-0.019
PARATHION METHYL ug/L	-0.019
PERMETHRIN ug/L	-0.015
PHORATE ug/L	-0.029
PROMETRYN ug/L	-0.019
SIMAZINE ug/L	0.096
TOXAPHENE ug/L	-0.072
TRIFLURALIN ug/L	-0.0077
ATRAZINE DESETHYL ug/L	-0.0096
PCB-1016 ug/L	-0.019
PCB-1221 ug/L	-0.019
PCB-1232 ug/L	-0.019
PCB-1242 ug/L	-0.019
PCB-1248 ug/L	-0.019
PCB-1254 ug/L	-0.019
PCB-1260 ug/L	-0.019

4.2.2 Testing Site Location and Layout: Figure 1 shows a location map of the testing site. Figure 2 shows a plan view of the site layout with staging area, raw water intake location, and finished water disposal location. Figure 3 is a photograph of the testing site. Note the two houses shown in the photograph have been removed from the site.

ADDENDUM 52.212-1 INSTRUCTIONS TO OFFERORS – COMMERCIAL ITEMS (OCT 2000)

SECTION (4) The submittals for Pilot Treatment Plant is revised to read as follows:

<p>Pilot Treatment Plant</p>	<p>This shall include: expected finished water quality (state whether the plant meets Option 1, or Option 2 criteria, site requirements, design description of process elements, flow-rate, chemical requirements, daily residual waster volume, residual quality (percent solids, chemistry, settling properties), power usage measurement devices, flow-rate measurement devices. The technical proposal shall include a detailed process flow diagram for the pilot/demonstration plant to be supplied. This process flow diagram shall depict all treatment process units including size, capacity and number of units; flow direction, quality and quantity for all liquid streams; flow direction, quality and quantity for all solids and residuals streams; expected finished water quality. All instrumentation and control equipment shall be shown.</p>
------------------------------	--

#1 QUESTION

We are very interested in demonstrating a unique technology but cannot adequately develop capital and operating cost information that is required to be included in the proposal. Table 3, Summary of Available Water Quality at Demonstration Site, does not contain all the needed parameters. Performance of the bidders technology will be determined, in part, by the water quality produced. The bidder is expected to provide analysis of treated water to determine compliance to all Primary and Secondary Water Standards and demonstrate nutrient (phosphate and nitrate) removal. However, this data has not been provided for the water at the demonstrate site (Table 3).

Therefore, the level or degree of treatment required cannot be ascertained.

Can additional water quality parameters be provided for the water at the demonstration site that includes analyses for all Primary and Secondary standards and the nutrient analysis requested in paragraph 2.2.4, i.e., total phosphorus, dissolved phosphorus, total nitrogen, TKN, and ammonia?

ANSWER: Tables 3.b. and 3.c. have been added to Paragraph 4.2.1 – Influent Water Quality Conditions to satisfy this question.

#2. QUESTION

Would you please send me any water quality data that may help us select the most applicable technology to propose in response to your RFP?

ANSWER: See Tables 3a, 3b, and 3c for additional water quality data.

#3. QUESTION

In the solicitation, it is stated that we have an operator 8 hours/day seven days per week. Does this mean that the pilot unit will be operated 8 hours/day for the 30 day trial period?

ANSWER: Operation is continuous 24 hours per day and 7 days per week for 30 to 60 days. Reference paragraph 2.2.3 of the Statement of Work.

#4. QUESTION:

In the task description par. 2.2.2 (site mobilization & process stabilization) we are allowed 15 days to stabilize process. Is this 15 day test period part of the 30 day test period? or is it in addition to the 30 day test period?

ANSWER: 15 day stabilization period is in addition to initial 30 day testing period. The intent of allowing 15 days is to ensure that the contractor has adequate time to prepare their operation. Contractors may require less time than 15 days to stabilize their process. Reference 2.2.2 of the Statement of Work.

#5. QUESTION:

p20 under the Pilot Treatment Plant discussion for the proposal the RFP says "...and 2) a description of additional process equipment that might be required to more effectively remove these three water quality constituents."

ANSWER: This sentence has been removed. There will be no reference to future water quality standards.

#6. QUESTION:

Is there any bromide in the water? If so, will you provide any data you may have?

ANSWER: There is no available bromide data at this location.