

**TECHNICAL INTERCHANGE MEETING NO. 4  
MEETING MINUTES AND RESPONSE TO COMMENTS ON DRAFT  
IMPLEMENTATION WORK PLAN FOR WATER AND WASTEWATER  
EVALUATION AND WATER SYSTEM REHABILITATION AT  
CAMP STANLEY STORAGE ACTIVITY, TEXAS  
FA8903-04-D-8675/DELIVERY ORDER 0022  
PARSONS 745006-01000**

Date: Thursday, 8 March 2007

Time: 2:30 pm – 4:30 pm.

Place: Camp Stanley Storage Activity (CSSA)

Subject: Progress Meeting to review draft Implementation Work Plan (IWP) comments, the latest proposed piping segments for the work, the budget status, and several regulatory issues related to the project implementation.

**Attendees:**

Attendee	Organization	Phone
Glaré Sanchez	CSSA ENV	(210) 698-5208
Tom Tijerina	CSSA Facilities Engineering	(210) 336-2372
Brian Vanderglas	Parsons	(512) 719-6059
Brian Siegfried	Portage/AFCEE	(210) 536-5208
Kyle Caskey	Parsons	(210) 204-8529
Eric Tennyson	Parsons	(210) 722-4364
Julie Burdey	Parsons	(512) 719-6000
Henry Dress	Parsons	(512) 719-6063

\*Minutes prepared by Henry Dress and Brian Vanderglas, Parsons

**Meeting Objectives**

The meeting was started by discussing the meeting objectives. The objectives were stated as follows:

- (1) Discuss comments on the Draft IWP
- (2) Discuss budget status and implementation sequence/prioritization.
- (3) Discuss and agree on final design requirements and possible implications of TCEQ regulations pertaining to the project.

Parsons attended a meeting with CSSA facilities and environmental personnel on December 21, 2006 to discuss CSSA preferences and design criteria that should be

incorporated into the draft IWP. The draft IWP was submitted on February 19, 2007 to CSSA and AFCEE for review, and Henry Dress visited CSSA on multiple occasions subsequent to the draft IWP submittal to inspect the existing conditions of the waterline system with Joe Ovalle and Kyle Caskey and to field verify locations of valves, lines, and other design critical information. The field verification visits led to some suggested changes to the draft IWP, and those were discussed at the meeting in addition to other CSSA comments on the draft IWP.

**Joe Ovalle's Verbal Comments on the Draft IWP (made during field verification visits):**

1. Use SDR 18 instead of SDR 14 C900 pipe given that SDR 18 is what CSSA has used in the past.
  - *Parsons believes this is a reasonable approach, however, Tom Tijerina believes the extra material cost and additional labor required to install SDR 14 is worth the extra cost. Therefore, SDR 14 will be specified for all 4-inch to 12-inch diameter pipe to be installed below ground. In addition, Henry Dress confirmed that SDR 14 and SDR 18 are compatible with each other.*
2. Use mechanical joint restraints instead of both restraints and thrust blocks since the supplemental mechanical restraints are quick and easy to install and remove, and because they achieve the same result as a thrust block.
  - *Parsons agrees with this approach and believes the installation will not only be easier but less expensive and more quickly repaired if there is ever a failure. However, thrust blocks will still be specified for select locations where required.*
3. Do not case piping under roads or creeks with ductile iron pipe (DIP), use 4' to 6" of above compacted fill. Using DIP as a casing or sleeve for C900 has not been done.
  - *Parsons agrees with this approach and believes the design criteria are adequate to prevent any damage to pipe from standard vehicle traffic since adequate bedding, cover material, depth and proper compaction are the keys to making the piping withstand surface loads.*
4. Install 16 new fire hydrants (FHs) and 6" valves because about 12 existing FHs are old and not functioning easily or on branch piping that must be replaced. Add about 4 new FHs along rerouted segments C, F and J.
  - *Parsons agrees with this comment to maintain fire protection system in top condition.*
5. Replace the old PIV at Bldg 200.
  - *Parsons agrees with this comment to maintain fire protection system in top condition.*

6. Delete original segments R, S, T, M, and Q since they are either newer than previously indicated, smaller than 4 inches in diameter or they are in a location where work is not desired at this time.
  - *Parsons agrees with this comment and with avoiding long branched sections in areas that have recently seen a lot of construction.*
7. Reservoir outlet line to north end needs replacement (new segment Q).
  - *Parsons agrees with this comment to identify for replacement piping not identified or mistakenly identified in the GIS shapefiles as "old ductile iron".*
8. Install new line to WWTP (new segment S), propose 2-inch diameter. The route of this line causes Tom Tijerina to be concerned about whether anything might be constructed in the future over that route that could interfere with it.
  - *Parsons agrees with this comment to replace existing old WWTP supply line, which has a tortuous path, and is susceptible to breakage given its reportedly poor condition. Parsons will visit with CSSA facilities and engineering staff regarding the final route to minimize any potential future impact.*
9. Install new main isolation valves at GAC shack.
  - *Parsons agrees with this comment to resolve existing situation where pavement covers and prevents operation of the existing valves.*

**Tom Tijerina's Verbal Comments on the Draft IWP (made during this meeting)**

10. Asbestos-cement pipe was not mentioned as one of the existing system's primary piping types in the Water System Overview on page 1-1.
  - *Asbestos cement will be added to the text. To address Glaré Sanchez's concern about properly identifying, handling, and disposing of asbestos-containing material (ACM), Parsons agreed to include language in the IWP to indicate where ACM is expected and how it will be managed.*
11. There is a discrepancy in the draft IWP between the reported typical daily consumption of 25,000 gpd and the Building Survey data, which shows 7000 to 8000 gpd (Table 3-7 showing 8,389 gpd daily use-domestic demand)..
  - *The water balance discrepancy will not be addressed in the IWP given the lack of data from sprinkler system flows, septic flows, and historically inaccurate WWTP flows. Well production data from recent months will be cited as the typical daily consumption in the IWP (30-35,000 gpd).*
12. CSSA emphasized that the sequence of work segments must be developed to implement the construction so that outages can be planned and scheduled and their duration estimated. Mr. Tijerina indicated that he would like to see a plan for interruption of service and coordinating outages included in the IWP.
  - *This requirement will be mentioned in the IWP, but the plan will be completed separately before construction begins and after a subcontractor has been*

*selected. Digging permits and utility interferences will also be noted in the plan for each segment.*

13. Glaré Sanchez wanted to be sure that the subcontract or the specifications will indicate that either CSSA or Parsons will GPS pipeline crown coordinates and that they be indicated on the as-built drawings, and that the Subcontractor will not be required to take these data.
  - *Parsons agrees with this comment and will mention in the subcontractor's statement of work that either Parsons or CSSA will ensure that locations of capped pipe and pipe type will be added to the GIS and that this will not be the responsibility of the subcontractor..*
14. Indicate fire protection improvements in the system by indicating specific hydrants or their locations where pressures or flows will be improved or upgraded.
  - *Parsons agrees with this comment and will mention these improvements in the IWP.*
15. Tom Tijerina requested that the IWP include a base map of the water system depicting all of the valve locations.
  - *Parsons indicated that the valves locations will be clearly marked on the various drawing for each section, but will also include a map in the final IWP showing all of the valve locations. NOTE: Existing valve locations will be approximate.*

### **Budget Status and Cost Comparisons**

A PowerPoint slide depicted the original budget for TO-22 and the status to date. Although all tasks (by WBS) are within budget, the subtask to rehabilitate Wells 9 and 10 has already exceeded the originally proposed budget and the rehab of well 9 is not yet complete.

Once the IWP for the water system is finalized and the drawings and specifications are approved by CSSA, a Request for Proposal will be issued to selected subcontractors. After obtaining "actual" subcontractor bids (cost estimates), an assessment can be made of the quantity of old pipe that can be rehabilitated. The most recent rough order of magnitude cost estimate indicates there are insufficient funds to replace all of the non-C900 pipe at CSSA with this project.

### **Other TO-22 Discussion Topics**

The following items were also discussed:

- ⇒ A 22"x34" map showing all the latest proposed pipe segments was reviewed. The total amount of piping identified for replacement is approximately 32,500 ft. Segments G and I which comprise the 8-inch mains along the north and east sections of the outer distribution loop (7,572 ft) are low priority according to Joe

Ovalle. These will be identified separately as optional under the subcontract and will be installed only if there is sufficient budget to fund these sections.

⇒ TCEQ Disinfection change approval status – Hypochlorite Tablet System

Rejection of the tablet system by the TCEQ was unexpected. Parsons will make inquiries into the reasons behind the rejection, request PPG provide additional support and schedule a meeting with the TCEQ permit engineer(s) to figure out what disinfection method will be used at the rehabilitated and new water wells.

⇒ Well 9 Rehab/Status (use of purge water at SWMU B-3?)

Rehab of well 9 is nearing completion. TCEQ and EPA granted permission to grout the bottom 50 ft of the well to seal off any potential contamination from old metal debris. A temporary pump will be installed, about 3000 gallons purged and sampled twice (24 hours apart) for metals. The purge water will be transported to B-3 and used to test the B-3 pumping system. If both sample results indicate metal concentrations are below MCLs, the new pump and discharge line will be re-installed, disinfected and placed back in service. Glaré Sanchez indicated that she wanted to test the well monthly until we obtain approval from TCEQ to put the well back in service. Ms. Sanchez will need to notify TCEQ before we reconnect the well to the water system.

⇒ Reuse of super-chlorinated disinfection water and flush water during testing.

Given the persistence of drought conditions, reusing the disinfection water seemed like a potential consideration, however, the cost of equipment and labor to accomplish that is likely to be prohibitively expensive. However, there is a possibility of using the chlorine water for the hydrostatic pressure test concurrent with disinfection to reduce water volume usage.

⇒ EA or CATEX?

Based on the amount of new piping planned in new trenches (17,628 ft) an Environmental Assessment does not appear to be needed since the expected disturbance width per foot of pipe trench excavated is estimated to be less than 10 ft, or total disturbed acreage associated with new pipe is less than 5 acres.

⇒ Edwards Aquifer Protection Plan (disturbed area > 5 acres)

Ideally the project activities will disturb less than 5 acres as defined by the Edwards Aquifer Protection Program regulations, otherwise an Edwards Aquifer Contributing Zone Protection Plan will be required along with a 60-day Agency review. The disturbed area is likely to be 5 acres or more if all 32,500 ft of proposed pipe is installed and the most conservative interpretation of the regulation is assumed. However, the disturbed area should be less than 5 acres if the amount of pipe installed excludes segments G and I (this would reduce the installed pipe to just under 25,000 ft), and the disturbed area does not include e.g., unpaved roads. Parsons will schedule a meeting with the TCEQ to gain a better understanding of the Agency's interpretation regarding disturbed land and proceed with an Edwards plan if required.

⇒ Chapter 290 Public Drinking Water Plan and Specification Review

TCEQ Regulations require “significant changes” to public water systems have plans and specifications subject to Agency review and approval. The regulation’s definition of “significant changes” is rather ambiguous and thus could be subject to a variety of interpretations. Parsons will include the TCEQ’s interpretation of what constitutes a significant change in the discussions when we meet with their water utilities section regarding the disinfection approach. Should the TCEQ see the changes as significant, a 6-month review and approval of the plans and specifications would be required.

⇒ All parties expressed concern regarding completion of a thorough check for buried utilities during implementation of the construction phase of this task order.

Specifically, there is a problem with on-post fiber. The fiber on-post cannot be traced because it does not contain copper, and CSSA is not willing to provide a map of the fiber for Parsons to use for their utility clearances. CSSA proposed to mark up Parsons drawings in those portions of the post where the trenching for new or replacement pipe may encounter fiber. The drawings currently being prepared for each section of pipeline could be marked up as part of the digging permit process Parsons will follow before initiating and intrusive activities.

⇒ CSSA indicated the water usage number for the car wash is an important number that they have interest in starting to track. Parsons indicated the historian will not be on-line until later in the month, so no data to date have been collected. Tom Tijerina suggested applying the total flow volume (from totalizer) and dividing by the average number of days to obtain an average daily use.

⇒ Parsons summarized some of the items described in the IWP that are not intended to be constructed under the subject task order. They are as follows:

- Wastewater system repairs.
- Installation of a new supply well and associated well building, well power service, well SCADA integration, etc.

**Follow-up Issues and Action Items**

- Parsons will proceed with completing the rehabilitation of Well CS-9. *The subcontractor’s latest schedule predicts mobilization the week of March 26, 2007.*
- Parsons will proceed with preparation of a CATEX and a construction storm water pollution prevention plan for the project.
- The IWP will be finalized and will include a response to comments and our understanding of the changes proposed to the water system (from December 21, 2006 meeting and TIM #4). The plan and profile drawings will include all of the latest proposed piping including optional Segments G and I. These drawings will be issued as part of the final IWP to CSSA for review and approval prior to issuing them for bid. These final IWP drawings (revision A) should be available for CSSA in early April.

- The testing specification will be written to instruct the Subcontractor to strive to conserve water, to use the chlorine water for hydrostatic testing and to dechlorinate all chlorine water released to the ground surface from testing activities.
- Parsons will contact TCEQ to arrange meetings with the appropriate group to discuss the various issues of concern.

### **TIM #3 FOLLOW-UP ISSUES AND ACTION ITEMS**

- Joe Ovalle and Chris Beal will do one last review of shape file data to double check that all existing materials and pipe diameters are correct. *This action was completed on October 27, 2008.*
- Parsons will implement a pump test at CS-Well H, and will attempt to monitor or ascertain whether there was any drawdown affected at the Fair Oaks wells. *Test performed October 31-November 2, 2006, Tech memo being prepared.*
- Parsons will prepare a series of maps depicting the pipe replacement priorities, including one showing Priority 1 pipe (cast iron, transite, etc.) and Priority 2 pipe (those locations associated with two leaks), and a second figure depicting the location of ductile iron pipe differentiating it by age. All maps will list the existing pipe diameter, pipe type, segment number with separate tables showing segment length and the cost to replace. A third map will be prepared depicting the water age. *This action was completed and figures will be depicted in the IWP.*
- Parsons will compare fire flows from “Roy’s” numbers to the Camp Bullis hydrant flows and the hydrant ratings, and will rerun the model for fire flows based on a minimum 1,000 gpm flows for each hydrant. *Done.*
- Parsons will implement some spot tests of pressure to verify modeled fire flow results of existing system to evaluate whether the C values used in the existing system model need to be modified. *These were completed and the results are discussed in the IWP/engineering report.*
- Parsons will evaluate whether an in-line pump is required to maintain flow to the North Pasture warehouse if no production well is installed. *Reviewed again based on fireflow evaluation for new warehouse, but determined that in-line pumps would not be required.*
- Parsons will include the 2-inch East Pasture line in one model run (assuming peak usage) to provide an assessment of the capacity of the 2-inch line for continuing to meet the needs of the East Pasture facilities. *Done.*
- An appendix to the water system engineering report portions of the IWP will include estimated costs for wastewater system repair recommendations. *Rough Order of Magnitude costs were included in the draft IWP.*



DEPARTMENT OF THE ARMY  
CAMP STANLEY STORAGE ACTIVITY, RRAD  
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

*Agenda for TIM#4*  
***Draft Implementation Work Plan Comments and Review Progress***  
***at CSSA***  
***Water & Wastewater System Evaluation and Water System Rehabilitation***  
***CDRL B006***  
***AFCEE WERC, Task Order 22***

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**Time:** Thursday, March 8, 2007; 2:30 pm to 4:30 pm

**Place:** Camp Stanley Storage Activity, Boerne, Texas, Environmental Office

**Proposed Order of Discussion**

<b>Date &amp; Time</b>	<b>Topic</b>
02:30 pm– 02:45 pm	Meeting Objectives Discuss CSSA comments on Draft IWP (Feb 19, 2007 submittal) Discuss proposed IWP changes per Detail Review with Joe Ovalle Discuss budget status & implementation sequence (prioritization) Determine possible implications of design (schedule/budget)
02:45 pm – 03:15 pm	IWP comments Changes proposed per Joe Ovalle detailed review Changes related to additional internal engineering review(s) - Model - GIS/utility maps Additional CSSA Comments & Questions
3:15 pm – 3:45 pm	Current Budget Status Expended to Date by WBS (Task) Funds Remaining to Complete Rehabilitation Current Cost to Complete Estimates vs Original Cost Basis Recommended Construction Bid Format
3:45 pm – 4:30 pm	Other TO-22 Discussion Topics and Action Items TCEQ review of Significant Change to Distribution System Well 9 Rehab/Status (use of purge water at SWMU B-3?) Disinfection change approval status EA or CATEX? Edwards Construction SWPP Plan or < 5 acres? Items included in IWP to be covered by different TOs (WW, new well) Other (SCADA, monitoring points, etc.)

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Task Order No. 0022  
Technical Progress Meeting #4

Water and Wastewater System Evaluation and  
Water System Rehabilitation at

Camp Stanley Storage Activity  
Boerne, TX

March 8, 2007

Project Objectives

- Main objectives of project
  - Determine Future water and wastewater needs ✓
  - Evaluate existing water and wastewater systems ✓
  - Provide recommendations for rehabilitation and upgrades –  
*in progress*
  - Prepare detail implementation work plans – *in progress*
  - Perform construction
  - Perform quality control and prepare as-built drawings

## Meeting Objectives

- Main objectives of Meeting:
  - Discuss comments on Draft IWP
  - Discuss budget status & implementation sequence/prioritization
  - Determine final design requirements & possible implications

## IWP Comments

- Per Joe Ovalle detailed review & preferences
  - Use SDR 18 pipe instead of SDR 14
  - Use mechanical joint restraints not thrust blocks
  - Do not case piping under roads or creeks
  - Install 16 new fire hydrants (FHs) and 6" valves
  - Replace one PIV
  - Delete original segments R, S, T, M, and Q
  - Reservoir outlet line to north end needs replaced (new segment Q)
  - Install new 2" line to WWTP (new segment S)

## IWP Comments (continued)

- Per Joe Ovalle detailed review & preferences
  - Install new isolation valves at GAC shack
  - Add segment of new pipe behind motor pool to replace old pipe (new segment M)
  - Replace 6" ductile line between WH 94 & 96 & loop to west side piping (new segment R)
  - Install valve manifold on good DIP at Bldg 36
  - Install approximately 16 new 12" valves, 5 new 10" valves, 22 new 8" valves, 10 new 6" valves not associated with FHs, and 4 new 4" valves.
  - Install 1 new 6" check valve

## IWP Comments (continued)

- Per Joe Ovalle detailed review & preferences
  - Install approximately 10 T-handle ball valves  $\leq 3"$
  - Install approximately 32,500 feet of new C900 (4"-12") & Sch 80 PVC ( $< 4"$ ) approximately 17,500 LF pipe in new trenches with 15,000 LF of pipe demo and replacement of existing pipe
  - Reroute segment C and other pipe segments to minimize surface disturbance (road, parking lot and unpaved surfaces), bldg interferences, removal/disposal of asbestos concrete pipe, and to ease construction, minimize outages, and facilitate maintenance. Habitat and wetlands disturbances will also be minimized.

## IWP Comments (continued)

- Changes/Comments from Parsons internal engineering reviews
  - Updated Model – using J.O. as-built info.
  - GIS/Utility map accuracy
  - Recommended loop instrument locations (Fig.4.1)
    - Flowmeters (2 proposed vs. 5 IWP)
    - Chlorine residual analyzers (0 proposed vs. 3 IWP)
- Additional CSSA Comments or Questions

## Current Budget Status

WBS	Task Description	Budget	Spent to Date
90	TO Mgmt (58% complete)	\$71k	\$38k
01	Meetings (38% complete)	\$46k	\$18k
02	Water/WW Evaluation & Engineering (98% complete)	\$282k	\$179k
03	Water & WW IWPs (72% complete)	\$119k	\$99k
04	Rehab Construction (5% complete)	\$2,421k	\$206k
05	Final Reports	\$58k	\$1k
		\$2,998k	\$541k

## Proposal Basis versus Latest IWP

### ROM Estimated Subcontracted Costs (\$K)

	<u>Original Proposal</u>	<u>Latest IWP</u>
SCADA	175	117
Lab Tests	10	25
Pipe Construction (all old*)	1993	2116
New Well Construction	62	0
Rehab Wells 9&10 Construction	38	206
Total	2421	2464

The IWP costs do not include all piping ancillaries, well building or CM oversight.

\*original proposal approximately 37,000 LF vs. 32,500 LF for IWP

## Other TO-22 Discussion Topics/Action Items

- TCEQ review of significant changes to dist. system?  
 290.39 (j) Changes in existing systems or supplies. Public water systems shall notify the executive director prior to making any significant change or addition to the system's production, treatment, storage, pressure maintenance, or distribution facilities. Public water systems shall submit plans and specifications for the proposed changes upon request.
  - (1) The following changes are considered to be significant:
    - (A) proposed changes to existing systems which result in an increase or decrease in production, treatment, storage, or pressure maintenance capacity;
    - (B) proposed changes to the disinfection process used at plants that treat surface water or groundwater that is under the direct influence of surface water including changes involving the disinfectants used, the disinfectant application points, or the disinfectant monitoring points;
    - (C) proposed changes to the type of disinfectant used to maintain a disinfectant residual in the distribution system;

## Other TO-22 Discussion Topics/Action Items

- TCEQ review of significant changes to dist. system (cont'd)?

290.39 (j)

(D) proposed changes in existing distribution systems when the change is greater than 10% of the existing distribution capacity or 250 connections, whichever is smaller, or results in the water system's inability to comply with any of the applicable capacity requirements of §290.45 of this title (relating to Minimum Water System Capacity Requirements); and

(E) any other material changes specified by the executive director.

(2) The executive director shall determine whether engineering plans and specifications will be required after reviewing the initial notification regarding the nature and extent of the modifications.

## Other TO-22 Discussion Topics/Action Items

- TCEQ Disinfection change approval status – Hypochlorite Tablet System
- Well 9 Rehab/Status (use of purge water at SWMU B-3?)
- Reuse of super-chlorinated disinfection water and flush water during testing
- EA or CATEX?
- Edwards Aquifer Protection Plan (disturbed area > 5 acres)
- Items in IWP to be done under other TOs
  - WW repairs
  - New supply well, well building, well power service, well SCADA integration, etc.
- Bid Form Breakdown