



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, MCAAP
25300 RALPH FAIR ROAD, BOERNE, TX 78015-4800

April 10, 2006

U-074-06

Mr. David Laughlin
Utilities Technical Review
Office of Permitting, Remediation and Registration
Water Supply Division
Texas Commission on Environmental Quality
PO Box 13087, MC-153
Austin, TX 78711-3087

VIA FACSIMILE: 512-239-0030

Subject: Rehabilitation of Water Production Wells 9 and 10,
Camp Stanley Storage Activity (CSSA), Boerne, TX,
System Identification Number: 0150117

Dear Mr. Laughlin:

The Camp Stanley Storage Activity (CSSA), McAlester Army Ammunition Plant, US Army Field Support Command, Army Materiel Command, U.S. Army, wishes to inform the Texas Commission on Environmental Quality (TCEQ) of their intention to rehabilitate water supply wells 9 and 10 for Public Water Supply (PWS) system 0150117.

Wells 9 and 10 are currently experiencing production problems including air entrained in the distribution system lines for reasons which may include faulty check valves, deteriorated column pipe, or other problems that are not yet determined. Another objective of the well upgrade is to ensure compatibility with the new SCADA system that is being installed in the near future and to reconfigure the current wellhead design so that it is compliant with current TCEQ PWS regulations.

The scope of work is to remove the existing pump systems in wells 9 and 10, conduct geophysical surveys in the open boreholes, improve and upgrade the existing well pads to meet TCEQ wellhead specifications, install new pumps and column piping, reconfigure the wellhead designs to incorporate flanged fittings and new flow meters and new check valves. This includes replacing all existing sub-grade equipment with above-grade fixtures. The wells will be sanitized and tested for bacteriological contamination prior to being put back into service, per 30 TAC Chapter 290 Subchapter D §290.41.

Wells 9 and 10 are a critical component to the facility and its mission. This work will be performed in a manner that will not interrupt supply of potable water to the facility. To accomplish this, the work will be phased by well until its completion, acceptance, and start-up prior to beginning work at the next well. It is anticipated that as many as 15 days will be needed to refurbish, test, and return a well to service. Since well 10 is the primary provider of potable water at CSSA, work will begin at well 9. Once

bacteriological testing is complete, well 9 will serve as the primary groundwater provider while well 10 is being refurbished. The anticipated mobilization date is April 17, 2006 and the completion of work is expected by May 12, 2006 (26 days).

After pump removal, the well pads will be thoroughly inspected and modified so that they are compliant with the current TCEQ regulations (Rules and Regulations for Public Water Systems 30 TAC Chapter 290 Subchapter D). At the time the well infrastructure was put in place (circa 1950's) it was compliant with regulatory requirements, but over the years new requirements have been promulgated.

The current configurations of the well pads include concrete sumps around the well heads. These sumps will be backfilled with soil and compacted as part of the upgrades. Additionally, a concrete apron that extends 3 feet in all directions from the well head will be constructed, and will be a minimum thickness of 6 inches in accordance with the TCEQ regulations. The apron will be flush with ground level to facilitate the replacement of the well housing.

New 20 horsepower (hp) submersible pumps will be installed in each well. The pump sizes were determined by analyzing water level data, aquifer characteristics derived from pumping tests conducted in August 2001 and the total dynamic head calculated for the system.

New column pipe will be installed within the wells. The pipe will be constructed of 3-inch diameter threaded and coupled galvanized steel pipe. The pipe will be installed in 21 foot joints (lengths). A brass check valve will be installed immediately above the pump, then every 250 feet thereafter along the column pipe, for a total of three downhole backflow devices per well.

Two small diameter gauging tubes will be installed in each well. These tubes will be used for transducer access and for water level measurements with a manual measuring device (e-line). The transducer and e-line gauging tubes will be constructed from 1-inch diameter PVC pipe and will be perforated to provide accurate water level measurements. All openings at the wellhead will be sealed in accordance with TCEQ requirements.

The pump power cable will be sufficiently sized #2 AWG jacketed copper wire, and will be secured to the column pipe at a minimum of two locations per pipe joint to minimize downhole entanglements. The existing pump control panel will be re-used to provide temporary manual control of the wells consistent with their current operation. The control panels will be upgraded to automatic control with programmable logic controllers (PLC) at a later date with the forthcoming SCADA system.

In compliance with current TCEQ regulations, the wellhead design will be upgraded to meet current guidelines. This includes the elimination of the current sub-grade piping within the well housings. The existing sub-grade equipment will be removed from the sump, and the distribution pipe will be modified such that it is brought above-

grade within the confines of the housing structure using a series of piping elbows.

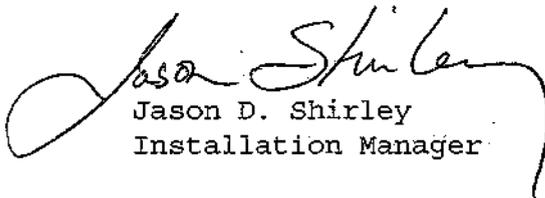
At the wellhead, an air relief/vacuum breaker valve will be installed to allow any accumulated gases (air) to be purged from the column pipe. A pressure gauge will also be incorporated at the wellhead. Additionally, a hose bib (sample faucet) will be installed to allow for groundwater samples to be obtained. A flowmeter will be installed at each well to measure the flowrate and totalize the volume pumped from the well. Finally, a 3-inch gate valve will be installed at the wellhead to allow for flow to be regulated, or allow the well to be manually isolated from the distribution system.

Outside of the buildings, an in-ground vault will house a swing check valve to prevent backflow from the distribution piping to the reservoir. These check valves will work in conjunction with the three downhole check valves to ensure that backflow into the wells is not possible.

After completion of well refurbishments, the wells will be disinfected in accordance with current American Water Well Association (AWWA) standards for well disinfection. The only deviation from the standard is that the disinfectant shall remain in the well for a minimum of six hours. Before the well can be placed into service, the disinfectant will be flushed from the well and samples of the water will be submitted for microbiological testing. Samples will be collected for analysis at 24 hour increments. The well will be placed in service after three successive daily raw water samples are free of coliform organisms.

If you have any further questions, or if we can be of any assistance, please contact Glare Sanchez, Environmental Program Manager, at (210) 698-5208.

Sincerely,


Jason D. Shirley
Installation Manager

cc:

Mr. Jim Cannizzo
US Army AMEDDDC&S AND FSH
Ms. Julie Burdey
Parsons
Mr. Brian Vanderglas
Parsons
Ms. Kimberly Vaughn
Parsons