

FINAL

June 2008

Off-Post

Quarterly Groundwater Monitoring Report



Prepared For

**Department of the Army
Camp Stanley Storage Activity
Boerne, Texas**

November 2008

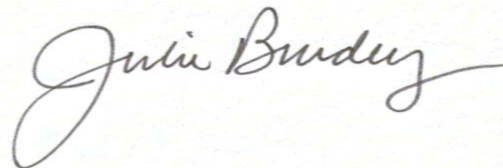
GEOSCIENTIST CERTIFICATION

June 2008 Off-post Quarterly Groundwater Monitoring Report

For

**Department of the Army
Camp Stanley Storage Activity
Boerne, Texas**

I, Julie Burdey, P.G., hereby certify that the June 2008 Off-post Quarterly Groundwater Monitoring Report for the Camp Stanley Storage Activity installation in Boerne, Texas accurately represents the site conditions of the subject area. This certification is limited only to geoscientific products contained in the subject report and is made on the basis of written and oral information provided by the CSSA Environmental Office, laboratory data provided by APPL, and field data obtained during groundwater monitoring conducted at the site in June 2008, and is true and accurate to the best of my knowledge and belief.



Julie Burdey, P.G.
State of Texas
Geology License No. 1913

11/06/08
Date

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EXECUTIVE SUMMARY

- A total of 29 off-post wells were sampled during the June 2008 monitoring event.
- Analyses indicated off-post wells OFR-3 and RFR-10 exceeded drinking water standards maximum contaminant level (MCL) for trichloroethene (TCE) and tetrachloroethene (PCE). Each of these wells was previously equipped with a granular activated carbon (GAC) treatment system.
- Semi-annual maintenance was performed at the five off-post GAC filter systems on May 20, 2008. Post GAC samples will be collected in September 2008.

JUNE 2008 OFF-POST GROUNDWATER MONITORING REPORT CAMP STANLEY STORAGE ACTIVITY

1.0 INTRODUCTION

This report presents results from the off-post quarterly sampling performed at Camp Stanley Storage Activity (CSSA) in June 2008 as required by the Administrative Order on Consent dated May 5, 1999. The purpose of this report is to present a summary of the sampling results. A similar report will summarize the planned September 2008 sampling results. Results from all four 2008 quarterly monitoring events (March, June, September, and December) will be described in detail in an Annual Report to be submitted after December 2008. The Annual Report will also provide an interpretation of all analytical results and an evaluation of any temporal or spatial trends observed in the groundwater contaminant plume during investigations.

Groundwater monitoring scoped under the U.S. Army Corps of Engineers (USACE) Fort Worth District (CESWF), Contract W91278-06-D-0026, Task Order DY02, was performed June 2 -6, 2008. The quarterly off-post groundwater monitoring program was initiated in September 2001 in accordance with the **Off-Post Monitoring Program and Response Plan (CSSA, June 2002)**, herein referred to as the "Plan". Action levels for detection of volatile organic compounds (VOCs) and the rationale for sampling off-post wells are located in the Plan.

The CSSA groundwater monitoring program also follows the provisions of the groundwater monitoring program DQOs as well as the recommendations of all applicable project-specific work plans. **Appendix A** provides an evaluation of the Data Quality Objective Attainment for this sampling event.

Current objectives of the off-post groundwater monitoring program include determining whether concentrations of chlorinated VOC detected in off-post public and private drinking water wells exceed safe drinking water standards. Other objectives are to determine the lateral and vertical extent of the contaminant plumes and identify trends (decreasing or increasing) in contaminant levels over time in the sampled wells.

2.0 JUNE 2008 ANALYTICAL RESULTS

In June 2008, twenty-nine samples were collected from off-post wells shown in **Figure 2.1**. Well JW-28 was added back into the program after the owner provide right-of-entry and the well will be sampled on a quarterly basis. Well JW-14 has reported non-detect samples for four consecutive quarters but due to the location of the well in relation to the plume, it will continue to be sampled on a quarterly basis. Post-GAC (granular activated carbon) samples were not collected during this event. Post-GAC samples (LS-6, LS-7, RFR-10, RFR-11, and OFR-3) are collected semi-annually and will be sampled again during the September 2008 monitoring event. **Table 2-1** includes the rationale for selection of the wells to be sampled in June 2008, and **Figure 2-1** gives well locations for the following sampled wells:

- Two public supply wells in the Fair Oaks area (FO-J1 and FO-17);
- Three public supply wells in the Hidden Springs Estates subdivision (HS-1, HS-2, and HS-3);

- One public well (I10-7) in the Interstate-10 area;
- Eleven privately owned wells in the Jackson Woods subdivision (JW-5, JW-6, JW-7, JW-8, JW-12, JW-13, JW-14, JW-27, JW-28, JW-29, and JW-30);
- Five wells in the Leon Springs Villa area (one public well: LS-6; two privately-owned wells: LS-5 and LS-7; and two wells: LS-1 and LS-4 that were taken out of service but will remain in the sampling program for data collection purposes);
- Two privately owned wells on Old Fredericksburg Road (OFR-1 and OFR-3); and
- Five privately owned wells in the Ralph Fair Road area (RFR-8, RFR-10, RFR-11, RFR-13, and RFR-14).

All wells were sampled from a tap located as close to the wellhead as possible. Most taps were previously installed by CSSA to obtain a representative groundwater sample before pressurization or storage of groundwater in the water supply distribution system. Water was purged to engage the well pump prior to sample collection. Conductivity, pH, and temperature readings were recorded to confirm adequate purging while the well was pumping. Generally, this required an average of 20 gallons to be purged prior to sample collection.

A total of 29 groundwater samples, three field duplicate samples, two matrix spike/matrix spike duplicate (MS/MSD) pairs, and two trip blanks were submitted to Agriculture & Priority Pollutant Laboratory (APPL) in Fresno, California for analysis. Groundwater samples were analyzed for the short list of VOCs using SW-846 Method 8260B. The approved short list of VOCs includes *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2-DCE, 1,1-DCE, tetrachlorethene (PCE), trichloroethene (TCE), and vinyl chloride.

The data packages (Parsons internal reference DY02 #63, #64, and #66) contain the analytical results for this sampling event. Laboratory results were reviewed and verified according to the guidelines outlined in the CSSA Quality Assurance Project Plan (QAPP), Version 1.0. Parsons received data packages on June 23 and 27, 2008.

Concentrations of the VOCs detected in June 2008 are presented in **Table 2-2**. Full analytical results from the June 2008 sampling event are presented in **Appendix B**. As shown in **Table 2-1**, 29 samples were scheduled for collection in June 2008 and all 29 samples were collected. Well I10-5 has still not been sampled due to the inability to contact the well owner for property access and no response to the recent access agreement mail out. Quarterly attempts to contact this well owner will continue to be made in the future.

On May 20, 2008 routine semi-annual maintenance was performed on the GAC treatment systems installed at LS-6, LS-7, OFR-3, RFR-10, and RFR-11. The carbon canisters were exchanged and the ultraviolet lights were replaced. Post-GAC samples were collected in March 2008 and will be collected again in September 2008.

Based on historical detections, the lateral extent of VOC contamination extends approximately 0.5 mile beyond the south and west boundaries of CSSA. Detections of VOCs have extended south to well HS-1 and HS-2 and west to OFR-1 (**Figure 2-1**).

Table 2-1
Sampling Rationale for June 2008

Well ID	2001		2002				2003				2004				2005				2006				2007				2008		Sampling Frequency:
	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Mar	June			
DOM-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
FO-8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
FO-17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
FO-22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
FO-J1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Dec 08		
HS-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
HS-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
HS-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
I10-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
I10-4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Plugged & abandoned		
I10-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	access agreement expired		
I10-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, for delineation		
I10-8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
JW-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
JW-6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
JW-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar. 09		
JW-8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar. 09		
JW-9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
JW-9-A2*	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed		
JW-12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar. 09		
JW-13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
JW-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, due to location		
JW-15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
JW-26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Wellowner declined access.		
JW-27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
JW-28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, due to location		
JW-29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, due to location		
JW-30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
LS-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	low flow pump to be installed		
LS-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline		
LS-2/LS-3-A1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline		
LS-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline		
LS-2/LS-3-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline		
LS-4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	low flow pump to be installed		
LS-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
LS-6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
LS-6-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
LS-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
LS-7-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
OFR-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
OFR-2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well was P&A by Centex		
OFR-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
OFR-3-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
OFR-4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Plugged & abandoned		
RFR-7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Plugged & abandoned		
RFR-8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar. 09		
RFR-10-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
RFR-10-B2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
RFR-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		
RFR-11-A2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Biannually (Mar & Sept)		
RFR-12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	As needed, once annually		
RFR-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Qtrly, 1 year thru Mar 09		

VOCs detected are greater than 90% of the MCL. Sample monthly; quarterly after GAC installation.

VOCs detected are less than 80% of the MCL (<4.0 ppb and >0.06 ppb for PCE & <4.0 ppb >0.05 ppb for TCE). After four quarters of stable results the well can be removed from quarterly sampling.

VOCs detected are greater than 80% of the MCL. The well will be placed on a monthly sampling schedule until GAC installation then quarterly sampling after GAC installation.

**This well has a GAC filtration unit installed by CSSA. Post GAC samples are collected every six months.
A1 - after GAC canister #1
A2 - after GAC canister #2
*JW-9-A2 is the well owner's system, not a CSSA GAC.**

Yes To be sampled in June 2008

FT First event for sampling by CSSA.

NS Not sampled for that event.

NA Not applicable, samples can no longer be collected from this location due to P&A or declined right-of-entry.

Total Pre GAC 29
 Total Post GAC 0
 Total # of first time samples 0
 Total # of samples: 29

**Table 2-2
June 2008 Off-Post Groundwater Results, Detected Analytes Only**

Subdivision	Well ID	Sample Date	1,1-DCE	cis -1,2-DCE	trans -1,2-DCE	PCE	TCE	Vinyl Chloride	Comments
Fair Oaks	FO-17	6/4/2008	--	--	--	--	--	--	2nd consecutive quarter with no VOC detections
	FO-J1	6/4/2008	--	--	--	--	--	--	
Hidden Springs	HS-1	6/3/2008	--	--	--	--	--	--	
	HS-2	6/3/2008	--	--	--	--	--	--	
	HS-3	6/3/2008	--	--	--	--	--	--	
IH-10	I10-7	6/4/2008	--	--	--	--	--	--	
Jackson Woods Subdivision	JW-5	6/4/2008	--	--	--	--	--	--	
	JW-6	6/4/2008	--	--	--	--	--	--	
	JW-7	6/6/2008	--	--	--	0.38F	--	--	low level PCE detections most quarters since 2003
	JW-8	6/5/2008	--	--	--	0.30F	--	--	low level PCE detections most quarters since 2003
	JW-12	6/6/2008	--	--	--	--	--	--	
	JW-13	6/5/2008	--	--	--	--	--	--	
	JW-14	6/4/2008	--	--	--	--	--	--	
	JW-27	6/4/2008	--	--	--	--	--	--	
	JW-28	6/4/2008	--	--	--	--	--	--	
Leon Springs Villas	LS-1	6/5/2008	--	--	--	--	--	--	
	LS-4	6/5/2008	--	--	--	--	--	--	
	LS-4 FD	6/5/2008	--	--	--	--	--	--	
	LS-5	6/2/2008	--	--	--	0.82F	1.4	--	
	LS-6*	6/2/2008	--	--	--	1.68	--	--	
	LS-7*	6/2/2008	--	--	--	2.78	--	--	
Old Fredericksburg Road	OFR-1	6/4/2008	--	--	--	--	--	--	
	OFR-1 FD	6/4/2008	--	--	--	--	--	--	
	OFR-3*	6/2/2008	--	--	--	6.56	5.5	--	The first time this well has exceeded the MCL since 3/07, GAC unit is installed.
Ralph Fair Road	RFR-8	6/5/2008	--	--	--	--	--	--	
	RFR-10*	6/2/2008	--	--	--	13.63	6.87	--	PCE and TCE below the MCL last quarter.
	RFR-10 FD*	6/2/2008	--	--	--	13.11	6.93	--	
	RFR-11*	6/2/2008	--	--	--	0.88F	1.28	--	
	RFR-13	6/4/2008	--	--	--	--	--	--	
	RFR-14	6/5/2008	--	--	--	0.26F	--	--	
Laboratory Detection Limits & Maximum Contaminant Level									
Method Detection Limit (MDL)			0.12	0.07	0.08	0.06	0.05	0.08	
Reporting Limit (RL)			1.2	1.2	0.6	1.4	1.0	1.1	
Max. Contaminant Level (MCL)			7	70	100	5	5	2	

This table presents preliminary data.
 All samples were analyzed by APPL, Inc.
 VOC data reported in ug/L.

Abbreviations/Notes:
 FD Field Duplicate
 TCE Trichloroethene
 PCE Tetrachloroethene
 DCE Dichloroethene
 * Well is equipped with a GAC. Results presented here are for water samples collected before the GAC treatment.

Data Qualifiers:
 F- The analyte was positively identified but the associated numerical value is below the RL.
 J - The analyte was positively identified, the quantitation is an estimation.

--	= Below the MDL (U flagged)
BOLD	= Above the MDL (F flagged)
BOLD	= Above the RL
BOLD	= Above the MCL

3.0 SUMMARY AND RECOMMENDATIONS

Results of the June 2008 sampling are summarized as follows:

- PCE and TCE exceeded the MCL in wells OFR-3 and RFR-10 in June 2008. Both wells are equipped with a GAC treatment systems.
- PCE/TCE was detected above the RL in wells LS-5, LS-6, LS-7, and RFR-11. Three of these wells have GAC treatment systems in place, and well LS-5 is monitored quarterly.
- Low levels (below 80% of the MCL) of PCE were also detected in wells JW-7, JW-8, and RFR-14.
- *Cis*-1,2-DCE, 1,1-DCE, *trans*-1,2-DCE, and vinyl chloride were not detected in any off-post wells in June 2008.
- No VOCs were detected in wells FO-17, FO-J1, HS-1, HS-2, HS-3, I10-7, JW-5, JW-6, JW-12, JW-13, JW-14, JW-27, JW-28, JW-29, JW-30, LS-1, LS-4, LS-4 field duplicate, OFR-1, OFR-1 field duplicate, RFR-8, and RFR-13.
- Post-GAC samples were not collected in June 2008. The next post-GAC samples will be collected in September 2008.
- In the event additional wells are located to the west and southwest of CSSA, they may be added to future sampling events.
- In accordance with project DQOs, the rationale for the selection of 30 wells to be sampled in September 2008 is provided in **Table 3-1**.

APPENDIX A
EVALUATION OF DATA QUALITY OBJECTIVES ATTAINMENT

Appendix A Evaluation of Data Quality Objectives Attainment

Activity	Objectives	Action	Objective Attained?	Recommendations
Field Sampling	Conduct field sampling in accordance with procedures defined in the project work plan, SAP, QAPP, and HSP.	All sampling was conducted in accordance with the procedures described in the project plans.	Yes	NA
Contamination Characterization (Groundwater Contamination)	Determine the potential extent of off-post contamination (§2.3.1 of the DQOs for the Groundwater Contamination Investigation, revised November 2003).	Samples for laboratory analysis were collected from selected off-post public and private wells, which are located within a ½ mile radius of CSSA.	Partially	Replace wells where no VOCs were detected with wells that may be identified in the future, located to the west and southwest of AOC-65 to provide better definition of plume 2. Continue sampling of wells to the west of plume 1 (Fair Oaks and Jackson Woods) to confirm any detections possibly related to plume 1.
	Meet CSSA QAPP quality assurance requirements.	Samples were analyzed in accordance with the CSSA QAPP, and approved variances. A chemist verified all data.	Yes	NA
		All data flagged with a “U” and “J” are usable for characterizing contamination.	Yes	NA

Activity	Objectives	Action	Objective Attained?	Recommendations
	Evaluate CSSA monitoring program and expand as necessary (§2.3.1 of the DQOs for the Groundwater Contamination Investigation, revised November 2003). Determine locations of future monitoring locations.	Evaluation of data collected is ongoing and is reported in this quarterly groundwater report and will be reported in future quarterly groundwater reports. Additional information covering the CSSA monitoring program is available in Volume 5, CSSA Environmental Encyclopedia.	Yes	Continue data evaluation and quarterly teleconferences for evaluation of the monitoring program. Each teleconference/planning session covers expansion of the quarterly monitoring program, if necessary.
Project schedule/ Reporting	The quarterly monitoring project schedule shall provide a schedule for sampling, analysis, validation, verification, reviews, and reports for monitoring events off-post.	A schedule for sampling, analysis, validation, and verification and data review and reports is provided in this quarterly groundwater report and will be reported in future quarterly groundwater reports. Additional information covering the CSSA monitoring program is available in Volume 5, CSSA Environmental Encyclopedia.	Yes	Continue quarterly reporting to include a schedule for sampling, analysis, validation, and verification and data review and data reports.

Activity	Objectives	Action	Objective Attained?	Recommendations
Remediation	Evaluate the effectiveness of GACs (§3.2.3) and install as needed (§3.2.5 both of the DQOs for the Groundwater Contamination Investigation, revised November 2003).	Perform maintenance as needed. Install new GACs as needed.	Yes	Maintenance to the off-post GAC systems to be continued by Parsons' personnel every 3 weeks. Twice yearly (or as needed) maintenance to the off-post GAC systems by additional subcontractors to continue. Evaluations of future sampling results for installation of new GAC systems will occur as needed.

APPENDIX B
JUNE 2008 QUARTERLY OFF-POST
GROUNDWATER ANALYTICAL RESULTS

Appendix B
June 2008 Quarterly Off-Post Groundwater Analytical Results

Well ID	Sample Date	1,1-DCE	<i>cis</i> -1,2-DCE	<i>trans</i> -1,2-DCE	PCE	TCE	Vinyl Chloride
FO-17	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-J1	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-1	6/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-2	6/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-3	6/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-7	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-5	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-7	6/6/2008	0.12U	0.07U	0.08U	0.38F	0.05U	0.08U
JW-12	6/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-13	6/5/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-14	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-27	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-29	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-30	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-6	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-8	6/5/2008	0.12U	0.07U	0.08U	0.30F	0.05U	0.08U
JW-28	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-1	6/5/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-4	6/5/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-4 FD	6/5/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-5	6/2/2008	0.12U	0.07U	0.08U	0.82F	1.4	0.08U
LS-6	6/2/2008	0.12U	0.07U	0.08U	1.68	0.05U	0.08U
LS-7	6/2/2008	0.12U	0.07U	0.08U	2.78	0.05U	0.08U
OFR-1	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-1 FD	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-3	6/2/2008	0.12U	0.07U	0.08U	6.56	5.5	0.08U
RFR-10	6/2/2008	0.12U	0.07U	0.08U	13.63	6.87	0.08U
RFR-10 FD	6/2/2008	0.12U	0.07U	0.08U	13.11	6.93	0.08U
RFR-11	6/2/2008	0.12U	0.07U	0.08U	0.88F	1.28	0.08U
RFR-13	6/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-14	6/5/2008	0.12U	0.07U	0.08U	0.26F	0.05U	0.08U
RFR-8	6/5/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U

This table presents preliminary data.
All samples were analyzed by APPL, Inc.
VOC data reported in ug/L.

Abbreviations/Notes:
FD Field Duplicate
TCE Trichloroethene
PCE Tetrachloroethene
DCE Dichloroethene

Data Qualifiers:
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F- The analyte was positively identified but the associated numerical value is below the RL.
J - The analyte was positively identified, the quantitation is an estimation.

BOLD	= Above the MDL (F flagged)
BOLD	= Above the RL
BOLD	= Above the MCL