FINAL

March 2007

Off-Post
Quarterly Groundwater Monitoring Report

Prepared For

Department of the Army
Camp Stanley Storage Activity
Boerne, Texas

May 2008

GEOSCIENTIST CERTIFICATION

March 2007 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 March 2007 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 March 2007, and is true and accurate to the best of my knowledge and belief.

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

_____
Date

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MARCH 2007
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 March 2007 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. Similar reports will summarize the planned June 2007 and September 2007 sampling results. Results from all four 2007 quarterly monitoring events (March, June, September, and December) will be described in detail in an Annual Report to be submitted after December 2007. 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 Air Force Center for Engineering and the Environment (AFCEE) 4P/AE Contract F41624-03-D-8613, Task Order (TO) 0207, was performed March 19 - 22, 2007. 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 decisions to sample an off-post well can be found on page 6 of the above-mentioned report.

In addition to the Data Quality Objectives (DQO), the CSSA groundwater monitoring program follows the provisions of the groundwater monitoring program DQOs as well as the recommendations of the **Three-Tiered Long Term Monitoring Network Optimization Evaluation (Parsons 2005)** which provided recommendations for sampling based on a long-term monitoring optimization (LTMO) study performed for the CSSA groundwater monitoring program. LTMO study sampling frequencies were implemented on-post in December 2005, as approved by the Texas Commission on Environmental Quality (TCEQ) and the United States Environmental Protection Agency (USEPA). **Appendix A** provides an evaluation of the Data Quality Objectives Attainment for this sampling event.

Current objectives of the off-post groundwater monitoring program include determining whether concentrations of chlorinated volatile organic compounds (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 MARCH 2007 ANALYTICAL RESULTS

Samples were collected from 32 off-post wells sampled in March 2007. Eight post-GAC (granular activated carbon) samples were also collected during the March 2007 event. Post-GAC samples (LS-2/LS-3, LS-6, LS-7, RFR-10, RFR-11, and OFR-3) are collected semi-annually and will be sampled again during the September 2007 monitoring event. **Table 2-1** includes the rationale for selection of the wells to be sampled in March 2007, and **Figure 2-1** gives well locations for the following sampled wells:

- One privately owned well in the Dominion subdivision (DOM-2);
- Two public supply wells in the Fair Oaks area (FO-J1 and FO-8);
- Two public supply wells in the Hidden Springs Estates subdivision (HS-1 and HS-2);
- Two public wells (I10-2 and I10-7) and one privately owned well in the Interstate-10 area (I10-4);
- Ten privately owned wells in the Jackson Woods subdivision (JW-5, JW-7, JW-8, JW-9, JW-14, JW-15, JW-27, JW-28, JW-29, and JW-30);
- Five wells in the Leon Springs Villa area (three public wells: LS-3, LS-4, and LS-6; and two privately-owned wells: LS-5 and LS-7);
- Three privately owned wells on Old Fredericksburg Road (OFR-1, OFR-3 and OFR-4); and
- Five privately owned wells in the Ralph Fair Road area (RFR-4, RFR-5, RFR-10, RFR-11 and RFR-14) and one public well (RFR-12).

All wells were sampled from a tap located as close to the wellhead as possible. Most taps were installed by CSSA to obtain a representative groundwater sample before pressurization or storage 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 40 groundwater samples, four field duplicate samples, two matrix spike/matrix spike duplicate (MS/MSD) pairs, and two trip blanks were submitted to APPL Laboratory (APPL) in Fresno, California for analysis. Groundwater samples were analyzed for the CSSA specific short list of VOCs using SW-846 Method 8260. The USEPA-approved short list of VOCs includes *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2-DCE, 1,1-DCE, PCE, TCE, and vinyl chloride.

The data packages (Parsons internal reference TO207 #11 - #12) 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). Parsons received data packages on April 11 and 13, 2007, and the data verification reports were submitted to AFCEE April 20, 2007. AFCEE approved these data packages on May 22, 2007.

Concentrations of only the VOCs detected in March 2007 are presented in **Table 2-2**. Full analytical results from the March 2007 sampling event are presented in **Appendix B**. As shown in **Table 2-1**, 32 wells and eight post-GAC samples were planned for sampling in March 2007. All 40 samples were collected. Post-GAC samples will be collected again in September 2007.

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 LS-4 and west to I10-7.

Table 2-1
Sampling Rationale for March 2007

Well ID	2001 Sept	2001 Dec	2002 Mar	2002 June	2002 Sept	2002 Dec	2003 Mar	2003 June	2003 Sept	2003 Dec	2004 Mar	2004 June	2004 Sept	2004 Dec	2005 Mar	2005 June	2005 Sept	2005 Dec	2006 Mar	2006 June	2006 Sept	2006 Dec	2007 Mar	Sampling Frequency:
DOM-2		NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
FO-8	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
FO-17	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	As needed, once annually
FO-J1												NS						NS	NS				Yes	Qtrly, 1 year thru Sept 07
HS-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			Yes	Qtrly, well recently put back online
HS-2	NS																						Yes	Qtrly, 1 year thru June 07
HS-3	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	Yes	As needed, once annually
I10-4	NS									NS													Yes	Qtrly, 1 year thru Sept. 07
I10-5	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	As needed, once annually
I10-7	NS	NS		NS	NS	NS			NS	NS	NS		NS										Yes	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	As needed, once annually
JW-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	Yes	As needed, once annually
JW-6		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															Yes	Qtrly, 1 year thru June 07
JW-8	NS	NS	NS	NS	NS	NS	NS																Yes	Qtrly, 1 year thru Sept 07
JW-9																NS	NS	NS		NS	NS	NS	Yes	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	As needed
JW-12		NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	NS		NS	NS	As needed, once annually
JW-13		NS	NS	NS	NS		NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	As needed, once annually
JW-14																			Tol				Yes	Qtrly, 1 year thru Mar 07
JW-15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					NS	NS	NS	Yes	As needed, once annually
JW-26	NS	NS		NS											NS	NS	NS		NS	NS	NS		NS	As needed, once annually
JW-27	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS						Yes	Qtrly, 1 year thru June 07
JW-28	NS	NS	NS	NS	NS	NS	NS	NS															Yes	Qtrly, 1 year thru June 07
JW-29	NS	NS	NS	NS	NS	NS	NS																Yes	Qtrly, due to location
JW-30	NS	NS	NS	NS	NS	NS																	Yes	Qtrly, 1 year thru June 07
LS-1													NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline
LS-2																		NS			NS	NS	NS	Well is dry
LS-2/LS-3-A1	NS	NS	NS	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
LS-3																							Yes	Qtrly, 1 year thru June 07
LS-2/LS-3-A2	NS	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
LS-4																							Yes	Qtrly, 1 year thru June 07
LS-5																							Yes	Qtrly, 1 year thru June 07
LS-6																							Yes	Qtrly, 1 year thru Sept 07
LS-6-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
LS-7																							Yes	Qtrly, 1 year thru Sept 07
LS-7-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
OFR-1	NS																						Yes	Qtrly, 1 year thru Sept 07
OFR-2	NS	NS																			NS	NS	NS	Well was P&A by Centex
OFR-3																							Yes	Qtrly, 1 year thru Sept 07
OFR-3-A2	NS	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
OFR-4	NS	NS	NS	NS	NS	NS	NS			NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
RFR-3	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	Tol	NS	NS	NS		NS	NS	NS	Yes	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	Yes	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	Well to be abandoned by owner
RFR-7		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	As needed, once annually
RFR-9			NS		NS	NS	NS			NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	As needed, once annually
RFR-10																							Yes	Qtrly, 1 year thru Sept 07
RFR-10-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
RFR-10-B2				NS	NS	NS	NS	NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
RFR-11																							Yes	Qtrly, 1 year thru Sept 07
RFR-11-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
RFR-12																				NS	NS	NS	Yes	As needed, once annually
RFR-13											Well Installed										NS	NS	NS	As needed, once annually
RFR-14																Well Installed							Yes	Qtrly, 1 year thru June 06

Total Pre GAC:	32
Total Post GAC:	8
Total # of first time samples	0
Total # of samples:	40

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

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

Yes — To be sampled in March 2007

VOCs detected are less than 80% of the MCL (<4.0 ppb and >0.11 ppb for PCE & <4.0 ppb >0.14 ppb for TCE). After four quarters of stable results the well can be removed from quarterly sampling.

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.

FT — First event for sampling by CSSA.

NS — Not sampled for that event.

No VOCs detected. Sample on an as needed basis.

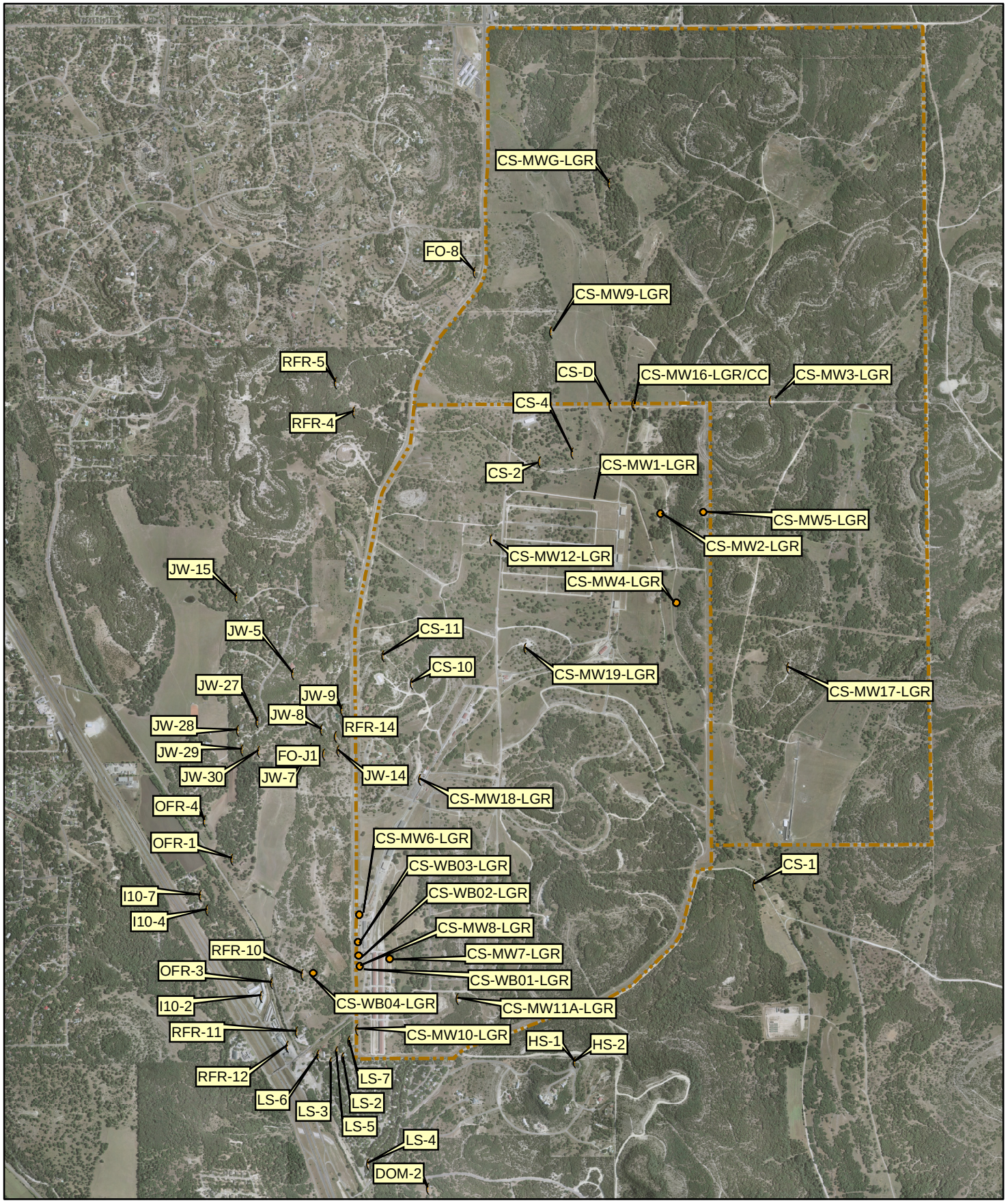

Figure 2.1

March 2007 Wells Sampled
Camp Stanley Storage Activity

P a r s o n s

J:\745\745251 CSSA TO0207\GIS\mxd\Mar_07_wells_samp.mxd

Table 2-2
March 2007 Off-Post Groundwater Results, Detected Analytes Only

Subdivision	Well ID	Date Sampled	1,1-DCE	*cis*-1.2-DCE	PCE	*trans*-1,2-DCE	TCE	Vinyl Chloride	Comments
Dominion	DOM-2	3/22/07	--	--	--	--	--	--	
Fair Oaks	FO-8	3/20/07	--	--	--	--	--	--	
	FO-J1	3/22/07	--	--	**0.16F**	--	--	--	
Hidden Springs Estates	HS-1	3/21/07	--	--	**0.15F**	--	--	--	
	HS-2	3/21/07	--	--	**0.16F**	--	--	--	
	HS-2 FD	3/21/07	--	--	**0.16F**	--	--	--	
IH-10 Area	I10-2	3/20/07	--	--	--	--	--	--	
	I10-4	3/22/07	--	--	**2.31**	--	**1.11**	--	
	I10-7	3/20/07	--	--	--	--	--	--	
	I10-7 FD	3/20/07	--	--	--	--	--	--	
Jackson Woods Subdivision	JW-5	3/20/07	--	--	**0.07F**	--	--	--	First PCE detection in this well.
	JW-7	3/21/07	--	--	**0.39F**	--	--	--	
	JW-8	3/21/07	--	**0.12F**	**0.31F**	--	--	--	
	JW-9	3/20/07	--	--	--	--	--	--	
	JW-14	3/22/07	--	--	**0.16F**	--	--	--	
	JW-15	3/20/07	--	--	--	--	--	--	
	JW-27	3/21/07	--	--	--	--	--	--	
	JW-28	3/21/07	--	--	--	--	--	--	
	JW-29	3/20/07	--	--	--	--	--	--	
	JW-30	3/22/07	--	--	--	--	--	--	
	JW-30 FD	3/22/07	--	--	--	--	--	--	
Leon Springs Villas	LS-3	3/21/07	--	--	**1.08F**	--	**0.66F**	--	
	LS-2/LS-3-A1	3/21/07	--	--	--	--	**0.19F**	--	
	LS-2/LS-3-A2	3/21/07	--	--	--	--	--	--	
	LS-4	3/21/07	--	--	**0.22F**	--	--	--	
	LS-5	3/19/07	--	--	--	--	**0.15F**	--	
	LS-6	3/19/07	--	--	**2.33**	--	**0.11F**	--	
	LS-6 FD	3/19/07	--	--	**2.51**	--	**0.13F**	--	
	LS-6-A2	3/19/07	--	--	--	--	--	--	
	LS-7	3/19/07	--	--	**2.1**	--	**0.41F**	--	
	LS-7-A2	3/19/07	--	--	--	--	--	--	
Old Fredericksburg Road	OFR-1	3/20/07	--	--	**0.35F**	--	--	--	
	OFR-3	3/19/07	--	**0.18F**	**8.15**	--	**4.8**	--	
	OFR-3-A2	3/19/07	--	--	--	--	--	--	
	OFR-4	3/20/07	--	--	--	--	--	--	
Ralph Fair Road	RFR-4	3/21/07	--	--	--	--	--	--	
	RFR-5	3/21/07	--	--	--	--	--	--	
	RFR-10	3/19/07	--	**0.13F**	**11.64**	--	**4.57**	--	
	RFR-10-A2	3/19/07	--	--	--	--	--	--	
	RFR-10-B2	3/19/07	--	--	--	--	--	--	
	RFR-11	3/19/07	--	--	**3.84**	--	--	--	
	RFR-11 A2	3/19/07	--	--	--	--	--	--	
	RFR-12	3/20/07	--	--	--	--	--	--	
	RFR-14	3/21/07	--	--	**0.10F**	--	--	--	
Laboratory Detection Limits									
Method Detection Limit		**MDL**	0.120	0.070	0.06	0.080	0.05	0.080	
Reporting Limit		**RL**	1.2	1.2	1.4	0.60	1.0	1.1	
Max. Contaminant Level		**MCL**	7	70	5	100	5	2	

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

This table presents detected analytical results only.
All samples were analyzed by APPL, Inc.
"--" indicates the result was non-detect

Abbreviations/Notes:
FD Field Duplicate

Data Qualifiers:
F- The analyte was positively identified but the associated numerical value is below the RL.

3.0 SUMMARY AND RECOMMENDATIONS

Results of the March 2007 sampling are summarized as follows:

- PCE exceeded the MCL in wells OFR-3 and RFR-10 in March 2007.
- PCE was detected below the MCL and above the RL in wells I10-4, LS-6, LS-7, and RFR-11.
- TCE was detected below the MCL and above the RL in wells I10-4, OFR-3, and RFR-10.
- PCE and/or TCE were detected below the RL in wells FO-J1, HS-1, HS-2, JW-5, JW-7, JW-8, JW-14, LS-3, LS-4, LS-5, OFR-1, and RFR-14.
- *Cis*-1,2-DCE was detected below the RL in wells JW-8, OFR-3, and RFR-10.
- Well JW-5 reported a low level PCE detection (0.07 µg/L) for the first time in March 2007. The sampling of this well will be increased from annually to quarterly in accordance with the DQOs.
- Trans-1,2-DCE was not detected in any wells during the March 2007 event.
- No VOCs were detected in wells DOM-2, FO-8, I10-2, I10-7, I10-7 field duplicate, JW-9, JW-15, JW-27, JW-28, JW-29, JW-30, JW-30 field duplicate, OFR-4, RFR-4, RFR-5, and RFR-12.
- Post GAC samples were collected in March 2007. Low levels of TCE were reported in sample LS-2/LS-3-A1. This sample is collected between the carbon canisters and filtered through the second carbon canister before being delivered as drinking water. The sample collected after filtration (LS-2/LS-3-A2) is representative of the water being delivered to homeowners; no VOCs were reported in this sample. No VOCs were reported in any of the other post-GAC samples (LS-2/LS-3-A2, LS-6-A2, LS-7-A2, OFR-3-A2, RFR-10-A2, RFR-10-B2, RFR-11-A2) confirming that the GAC units are functioning properly. The next post-GAC samples will be collected in September 2007.
- In the event additional wells are located to the west and southwest of CSSA, they may be added to future sampling events. Future sampling events will continue to include wells to the west of CS-D and CS-MW16-LGR (Fair Oaks and Jackson Woods Subdivision areas) to confirm they continue to meet drinking water standards.
- In accordance with project DQOs, rationale for the selection of 29 wells to be sampled in June 2007 is provided in **Table 3-1**.

Table 3-1
Sampling Rationale for June 2007

Well ID	2001		2002				2003				2004				2005				2006				2007		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	
DOM-2		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	As needed, once annually
FO-17	NS	NS		NS	NS	NS		NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
FO-22		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					Yes	Qtrly, 1 year thru March 08
HS-1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS				Yes	Qtrly, 1 year thru March 08
HS-2	NS																							Yes	Qtrly, 1 year thru March 08
HS-3	NS		NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	NS	NS	NS	Yes	As needed, once annually
I10-2																				NS	NS	NS		NS	As needed, once annually
I10-4	NS									NS														Yes	Qtrly, 1 year thru March 08
I10-5	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	As needed, once annually
I10-7	NS	NS		NS	NS	NS			NS	NS	NS		NS											Yes	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	As needed, once annually
JW-5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS					NS	NS	NS		Yes	Qtrly, 1 year thru March 08
JW-6		NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
JW-7		NS	NS	NS	NS	NS	NS	NS																Yes	Qtrly, 1 year thru March 08
JW-8	NS	NS	NS	NS	NS	NS	NS																	Yes	Qtrly, 1 year thru March 08
JW-9																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	As needed
JW-12		NS	NS	NS	NS		NS	NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	NS		NS	NS	NS	As needed, once annually
JW-13		NS	NS	NS	NS		NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
JW-14																			Tol					Yes	Qtrly, 1 year thru March 08
JW-15	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	As needed, once annually
JW-27	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS							Yes	Qtrly, 1 year thru Dec. 07
JW-28	NS	NS	NS	NS	NS	NS	NS	NS																Yes	Qtrly, 1 year thru June 07
JW-29	NS	NS	NS	NS	NS	NS	NS																	Yes	Qtrly, due to location
JW-30	NS	NS	NS	NS	NS	NS																		Yes	Qtrly, 1 year thru June 07
LS-1													NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline
LS-2																		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	Biannually (Mar & Sept)
LS-3																								Yes	Qtrly, 1 year thru March 08
LS-2/LS-3-A2	NS	NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
LS-4																								Yes	Qtrly, 1 year thru March 08
LS-5																								Yes	Qtrly, 1 year thru March 08
LS-6																								Yes	Qtrly, 1 year thru March 08
LS-6-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
LS-7																								Yes	Qtrly, 1 year thru March 08
LS-7-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
OFR-1	NS																							Yes	Qtrly, 1 year thru March 08
OFR-2	NS	NS																		NS	NS	NS	NS	NS	Well was P&A by Centex
OFR-3																								Yes	Qtrly, 1 year thru March 08
OFR-3-A2	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	As needed, once annually
RFR-3	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	Tol	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	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	Well to be abandoned by owner
RFR-7		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	Yes	As needed, once annually
RFR-9			NS		NS	NS	NS			NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	As needed, once annually
RFR-10																								Yes	Qtrly, 1 year thru March 08
RFR-10-A2				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	Biannually (Mar & Sept)
RFR-11																								Yes	Qtrly, 1 year thru March 08
RFR-11-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
RFR-12																				NS	NS	NS		NS	As needed, once annually
RFR-13											Well Installed										NS	NS	NS	Yes	As needed, once annually
RFR-14																Well Installed								Yes	Qtrly, 1 year thru March 08

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

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

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

Yes — To be sampled in March 2007

FT — First event for sampling by CSSA.

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.

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.

NS — Not sampled for that event.

No VOCs detected. Sample on an as needed basis.

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	Bi-monthly maintenance to the off-post GAC systems to be continued by Parsons' personnel. Quarterly (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
March 2007 Quarterly Off-Post Groundwater Analytical Results

Well ID	Date Sampled	1,1-DCE	*cis* -1.2-DCE	PCE	*trans* -1,2-DCE	TCE	Vinyl Chloride
DOM-2	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
FO-8	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
FO-J1	3/22/07	0.12U	0.07U	**0.16F**	0.08U	0.05U	0.08U
HS-1	3/21/07	0.12U	0.07U	**0.15F**	0.08U	0.05U	0.08U
HS-2	3/21/07	0.12U	0.07U	**0.16F**	0.08U	0.05U	0.08U
HS-2 FD	3/21/07	0.12U	0.07U	**0.16F**	0.08U	0.05U	0.08U
I10-2	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
I10-4	3/22/07	0.12U	0.07U	**2.31**	0.08U	**1.11**	0.08U
I10-7	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
I10-7 FD	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-5	3/20/07	0.12U	0.07U	**0.07F**	0.08U	0.05U	0.08U
JW-7	3/21/07	0.12U	0.07U	**0.39F**	0.08U	0.05U	0.08U
JW-8	3/21/07	0.12U	**0.12F**	**0.31F**	0.08U	0.05U	0.08U
JW-9	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-14	3/22/07	0.12U	0.07U	**0.16F**	0.08U	0.05U	0.08U
JW-15	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-27	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-28	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-29	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-30	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-30 FD	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-3	3/21/07	0.12U	0.07U	**1.08F**	0.08U	**0.66F**	0.08U
LS-2/LS-3-A1	3/21/07	0.12U	0.07U	0.06U	0.08U	**0.19F**	0.08U
LS-2/LS-3-A2	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-4	3/21/07	0.12U	0.07U	**0.22F**	0.08U	0.05U	0.08U
LS-5	3/19/07	0.12U	0.07U	0.06U	0.08U	**0.15F**	0.08U
LS-6	3/19/07	0.12U	0.07U	**2.33**	0.08U	**0.11F**	0.08U
LS-6 FD	3/19/07	0.12U	0.07U	**2.51**	0.08U	**0.13F**	0.08U
LS-6-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-7	3/19/07	0.12U	0.07U	**2.1**	0.08U	**0.41F**	0.08U
LS-7 A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
OFR-1	3/20/07	0.12U	0.07U	**0.35F**	0.08U	0.05U	0.08U
OFR-3	3/19/07	0.12U	**0.18F**	**8.15**	0.08U	**4.8**	0.08U
OFR-3-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
OFR-4	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-4	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-5	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-10	3/19/07	0.12U	**0.13F**	**11.64**	0.08U	**4.57**	0.08U
RFR-10-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-10-B2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-11	3/19/07	0.12U	0.07U	**3.84**	0.08U	0.05U	0.08U
RFR-11-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-12	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-14	3/21/07	0.12U	0.07U	**0.10F**	0.08U	0.05U	0.08U

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

Abbreviations/Notes:
FD Field Duplicate

This table presents all laboratory results.
All samples were analyzed by APPL, Inc.
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.
U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
M- Matrix Effect Present