FINAL

March 2008

Off-Post
Quarterly Groundwater Monitoring Report

Prepared For

Department of the Army
Camp Stanley Storage Activity
Boerne, Texas

July 2008

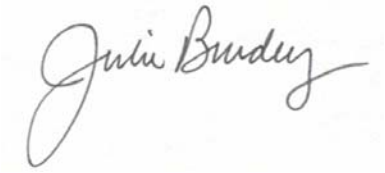
GEOSCIENTIST CERTIFICATION

March 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 March 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 March 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

7/17/2008

Date

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EXECUTIVE SUMMARY

- A total of 29 off-post wells were sampled during the March 2008 monitoring event.
- Analyses indicated no off-post wells exceeded drinking water standards maximum contaminant level (MCL) for volatile organic compounds (VOCs). Samples from the off-post wells were not analyzed for metals.
- Semi-annual maintenance was performed at the five off-post granular activated carbon (GAC) filter systems. Analyses of water samples collected after GAC filtration indicated no VOCs.

MARCH 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 March 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. Similar reports will summarize the planned June and 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 March 3 - 7, 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 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 2008 ANALYTICAL RESULTS

Thirty-five samples were collected from 29 off-post wells in March 2008. Two wells (I10-5 and JW-12) were not sampled due to the inability to contact the well owners for property access. Post-GAC (granular activated carbon) samples were collected during this event. These 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 March 2008, and **Figure 2-1** gives well locations for the following sampled wells:

- One privately owned well in the Dominion subdivision (DOM-2);
- Three public supply wells in the Fair Oaks area (FO-J1, FO-8, and FO-22);
- Two public supply wells in the Hidden Springs Estates subdivision (HS-1 and HS-2);
- Two public wells (I10-2 and I10-7) in the Interstate-10 area;

- Nine privately owned wells in the Jackson Woods subdivision (JW-5, JW-7, JW-8, JW-9, JW-14, JW-15, JW-27, JW-29, and JW-30);
- Three wells in the Leon Springs Villa area (one public well: 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
- Six privately owned wells in the Ralph Fair Road area (RFR-4, RFR-5, RFR-10, RFR-11, RFR-12, and RFR-14).

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 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 35 groundwater samples, four 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 #38 - #39) 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 March 27 and 31, 2008.

Concentrations of the VOCs detected in March 2008 are presented in **Table 2-2**. Full analytical results from the March 2008 sampling event are presented in **Appendix B**. As shown in **Table 2-1**, 38 samples were scheduled for collection in March 2008. Thirty-five of the 38 samples scheduled were collected. The homeowner at the location of well JW-26 has elected not to participate in the CSSA groundwater monitoring program. The homeowner denied access to the property. CSSA has offered to include this well in future sampling events if the homeowner requests additional sampling and agrees to sign an access agreement. Wells JW-12 and I10-5 were not sampled due to the inability to contact the well owners for property access. These two wells will be added to the next quarterly sampling event scheduled in June 2008.

On January 25, 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. **(Fig. 2-1)**

Table 2-1
Sampling Rationale for March 2008

Well ID	2001		2002				2003				2004				2005				2006				2007				2008	Sampling
	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	Frequency:
DOM-2		NS		NS	NS	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		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		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	Yes	As needed, once annually
FO-J1												NS						NS	NS								Yes	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							Yes	Qtrly, 1 year thru Dec 08
HS-2	NS																										Yes	Qtrly, 1 year thru Dec 08
HS-3	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	Yes	As needed, once annually
I10-4	NS									NS														NS	NS	NS	NS	Plug & Abandonment Report pending
I10-5	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	Yes	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	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		NS	NS	NS	As needed, once annually
JW-7		NS	NS	NS	NS	NS	NS	NS																			Yes	Qtrly, 1 year thru Dec. 08
JW-8	NS	NS	NS	NS	NS	NS	NS																				Yes	Qtrly, 1 year thru Dec. 08
JW-9																NS	NS	NS		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	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			Yes	Qtrly, 1 year thru Sept. 08
JW-13		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																			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	NS	NS	Yes	As needed, once annually
JW-26	NS	NS		NS											NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	Yes	As needed, once annually
JW-27	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS									NS	Yes	Qtrly, 1 year thru Mar 08
JW-28	NS	NS	NS	NS	NS	NS	NS	NS																	NS	NS	NS	Wellowner declined access.
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 08
LS-1												NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Well is offline
LS-2																	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	Well is offline
LS-3																								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	Well is offline
LS-4																								NS	NS	NS	NS	Well is offline
LS-5																											Yes	Qtrly, 1 year thru Dec 08
LS-6																											Yes	Qtrly, 1 year thru Dec 08
LS-6-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
LS-7																											Yes	Qtrly, 1 year thru Dec. 08
LS-7-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
OFR-1	NS																										Yes	Qtrly, 1 year thru Dec 08

Table 2-1
Sampling Rationale for March 2008

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	2007 June	2007 Sept	2007 Dec	2008 Mar	Sampling Frequency:
OFR-2	NS	NS																		NS	NS	NS	NS	NS	NS	NS	NS	Well was P&A by Centex
OFR-3																											Yes	Qtrly, 1 year thru Dec. 08
OFR-3-A2	NS	NS		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		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	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	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		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	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	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	As needed, once annually
RFR-9			NS		NS	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 Dec. 08
RFR-10-A2				NS		NS		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		NS		NS	Yes	Biannually (Mar & Sept)
RFR-11																											Yes	Qtrly, 1 year thru Dec. 08
RFR-11-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Yes	Biannually (Mar & Sept)
RFR-12																				NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
RFR-13											Well Installed										NS	NS	NS		NS	NS	NS	As needed, once annually
RFR-14																Well Installed											Yes	Qtrly, 1 year thru Dec 08

Total Pre GAC	32
Total Post GAC	6
Total # of first time samples	0
Total # of samples:	38

	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.
	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 September 2007
FT	First event for sampling by CSSA.
NS	Not sampled for that event.
	No VOCs detected. Sample on an as needed basis.

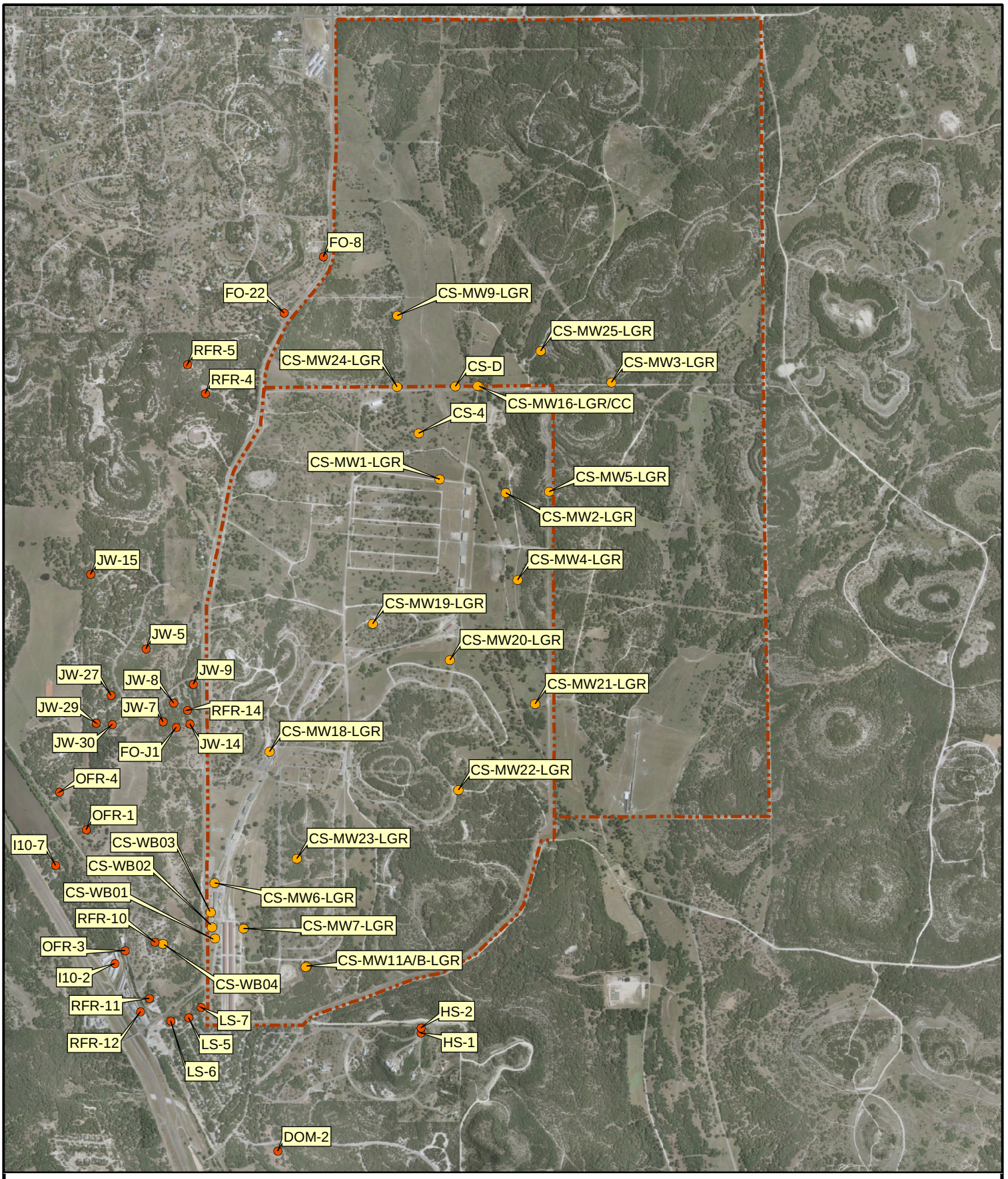

Figure 2-1

On-Post & Off-Post Well Sampling Locations for March 2008

Camp Stanley Storage Activity

P a r s o n s

J:\745\745953 CSSA DY02\GIS\Mar08_On_Post_Sampled_Wells.mxd - 7/16/2008 @ 1:05:29 PM

Table 2-2
March 2008 Off-Post Groundwater Analytical 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
Dominion	DOM-2	3/6/2008	--	--	--	--	--	--	No historical detection in this well.
Fair Oaks	FO-22	3/3/2008	--	--	--	--	--	--	
	FO-8	3/3/2008	--	--	--	--	--	--	
	FO-J1	3/3/2008	--	--	--	--	--	--	
	FO-J1 FD	3/3/2008	--	--	--	--	--	--	
Hidden Springs	HS-1	3/6/2008	--	--	--	**0.2F**	--	--	
	HS-2	3/6/2008	--	--	--	**0.17F**	--	--	
IH-10 Area	I10-2	3/4/2008	--	--	--	--	--	--	
	I10-7	3/4/2008	--	--	--	--	--	--	
Jackson Woods Subdivision	JW-14	3/6/2008	--	--	--	--	--	--	This is the 4th consecutive sample with no detections. This well will stay on a quarterly schedule due to its proximity to other contaminated wells.
	JW-15	3/4/2008	--	--	--	--	--	--	
	JW-27	3/6/2008	--	--	--	**0.12F**	--	--	
	JW-27 FD	3/6/2008	--	--	--	**0.07F**	--	--	
	JW-29	3/4/2008	--	--	--	**0.1F**	--	--	
	JW-30	3/4/2008	--	--	--	**0.16F**	--	--	First PCE detection since June 2006.
	JW-5	3/5/2008	--	--	--	**0.11F**	--	--	Highest PCE detection for this well.
	JW-7	3/6/2008	--	--	--	**0.26F**	--	--	
	JW-8	3/6/2008	--	--	--	**0.29F**	--	--	
	JW-9	3/6/2008	--	--	--	--	--	--	
	JW-9 FD	3/6/2008	--	--	--	--	--	--	
Leon Springs Villas	LS-5	3/3/2008	--	--	--	--	**0.85F**	--	
	LS-6	3/3/2008	--	--	--	**1.27F**	--	--	
	LS-6-A2	3/3/2008	--	--	--	--	--	--	
	LS-7	3/3/2008	--	--	--	**2.05**	**0.43F**	--	
	LS-7-A2	3/3/2008	--	--	--	--	--	--	
Old Fredericksburg Road	OFR-1	3/6/2008	--	--	--	**0.26F**	--	--	
	OFR-3	3/3/2008	--	--	--	**4.41**	**3.38**	--	Concentrations have increased since last quarter.
	OFR-3-A2	3/3/2008	--	--	--	--	--	--	
	OFR-4	3/6/2008	--	--	--	--	--	--	
Ralph Fair Road	RFR-10	3/3/2008	--	--	--	**4.43**	**3.27**	--	Significant decrease in PCE/TCE concentrations since last quarter (PCE=10.04, TCE=5.93)
	RFR-10-A2	3/3/2008	--	--	--	--	--	--	
	RFR-10-B2	3/3/2008	--	--	--	--	--	--	
	RFR-11	3/3/2008	--	--	--	--	**0.08F**	--	
	RFR-11-A2	3/3/2008	--	--	--	--	--	--	
	RFR-12	3/4/2008	--	--	--	--	--	--	
	RFR-14	3/6/2008	--	--	--	**0.18F**	--	--	
	RFR-4	3/4/2008	--	--	--	--	--	--	
	RFR-4 FD	3/4/2008	--	--	--	--	--	--	
	RFR-5	3/4/2008	--	--	--	--	--	--	
Laboratory Detection Limits and Maximum Contaminat Level									
Method Detection Level	**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	1.1	
Max. Contaminant Level	**MCL**		7	70	100	5	5	2	

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

This table presents detected analytical results only.
All samples were analyzed by APPL, Inc.
All data reported in ug/L.

Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene

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.

3.0 SUMMARY AND RECOMMENDATIONS

Results of the March 2008 sampling are summarized as follows:

- PCE and TCE did not exceed the MCL in any off-post wells in March 2008.
- PCE was detected above the RL in wells LS-7, OFR-3, and RFR-10. These 3 wells have GAC treatment systems in place.
- TCE was detected in wells LS-5, LS-7, OFR-3, RFR-10, and RFR-11.
- PCE and/or TCE were detected below the RL in wells HS-1, HS-2, JW-27, JW-27 field duplicate, JW-29, JW-30, JW-5, JW-7, JW-8, LS-5, LS-6, LS-7, OFR-1, RFR-11 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 March 2008.
- No VOCs were detected in wells DOM-2, FO-22, FO-8, FO-J1, I10-2, I10-7, JW-14, JW-15, JW-9, JW-9 field duplicate, LS-6-A2, LS-7-A2, OFR-3-A2, OFR-4, RFR-10-A2, RFR-10-B2, RFR-11-A2, RFR-12, RFR-4, RFR-4 field duplicate, and RFR-5.
- Post-GAC samples were collected in March 2008. All post-GAC samples were non detect indicating the GAC units are functioning properly. 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 29 wells to be sampled in June 2008 is provided in **Table 3-1**.

Table 3-1
Sampling Rationale for June 2008

Well ID	2001		2002				2003				2004				2005				2006				2007				2008		Sampling
	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Sept	Dec	Mar	June	Frequency:
DOM-2		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	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	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	NS	NS		NS	As needed, once annually
FO-J1												NS						NS	NS									Yes	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								Yes	Qtrly, 1 year thru Mar 09
HS-2	NS																											Yes	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	Yes	As needed, once annually
I10-2																				NS	NS	NS		NS	NS	NS		NS	As needed, once annually
I10-4	NS									NS														NS	NS	NS	NS	NS	Plug & Abandonment Report pending
I10-5	NS	NS	NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS		NS	NS	NS	NS	NS	Yes	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	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 Mar 09
JW-6		NS	NS		NS	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 Mar. 09
JW-8	NS	NS	NS	NS	NS	NS	NS																					Yes	Qtrly, 1 year thru Mar. 09
JW-9																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	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	Yes	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	Yes	As needed, once annually
JW-14																			Tol									Yes	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	As needed, once annually
JW-26	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		Yes	Qtrly, 1 year thru Mar 09
JW-28	NS	NS	NS	NS	NS	NS	NS	NS																	NS	NS	NS	NS	Wellowner declined access.
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 Mar 09
LS-1													NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	Yes	low flow pump to be installed
LS-2																		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	Well is offline
LS-3																								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	Well is offline
LS-4																								NS	NS	NS	NS	Yes	low flow pump to be installed
LS-5																												Yes	Qtrly, 1 year thru Mar 09
LS-6																												Yes	Qtrly, 1 year thru Mar 09
LS-6-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
LS-7																												Yes	Qtrly, 1 year thru Mar 09
LS-7-A2				NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS		NS	Biannually (Mar & Sept)
OFR-1	NS																											Yes	Qtrly, 1 year thru Mar 09
OFR-2	NS	NS																		NS	NS	NS	NS	NS	NS	NS	NS	NS	Well was P&A by Centex

Table 3-1
Sampling Rationale for June 2008

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	2007 June	2007 Sept	2007 Dec	2008 Mar	2008 June	Sampling Frequency:
OFR-3																												Yes	Qtrly, 1 year thru Mar 09
OFR-3-A2	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	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	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	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	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	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	Plugged & abandoned
RFR-8		NS	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-9			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																												Yes	Qtrly, 1 year thru Mar. 09
RFR-10-A2				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	Biannually (Mar & Sept)
RFR-11																												Yes	Qtrly, 1 year thru Mar 09
RFR-11-A2				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	As needed, once annually
RFR-13											Well Installed										NS	NS	NS		NS	NS	NS	Yes	As needed, once annually
RFR-14																Well Installed												Yes	Qtrly, 1 year thru Mar 09

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 September 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	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
MARCH 2008 QUARTERLY OFF-POST GROUNDWATER ANALYTICAL RESULTS

Appendix B
March 2008 Off-Post Groundwater Analytical Results

Well ID	Sample Date	1,1-DCE	*cis* -1,2-DCE	*trans* -1,2-DCE	PCE	TCE	Vinyl Chloride
DOM-2	3/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-22	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-8	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-J1	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-J1 FD	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-1	3/6/2008	0.12U	0.07U	0.08U	**0.2F**	0.05U	0.08U
HS-2	3/6/2008	0.12U	0.07U	0.08U	**0.17F**	0.05U	0.08U
I10-2	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-7	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-14	3/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-15	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-27	3/6/2008	0.12U	0.07U	0.08U	**0.12F**	0.05U	0.08U
JW-27 FD	3/6/2008	0.12U	0.07U	0.08U	**0.07F**	0.05U	0.08U
JW-29	3/4/2008	0.12U	0.07U	0.08U	**0.1F**	0.05U	0.08U
JW-30	3/4/2008	0.12U	0.07U	0.08U	**0.16F**	0.05U	0.08U
JW-5	3/5/2008	0.12U	0.07U	0.08U	**0.11F**	0.05U	0.08U
JW-7	3/6/2008	0.12U	0.07U	0.08U	**0.26F**	0.05U	0.08U
JW-8	3/6/2008	0.12U	0.07U	0.08U	**0.29F**	0.05U	0.08U
JW-9	3/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-9 FD	3/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-5	3/3/2008	0.12U	0.07U	0.08U	0.06U	**0.85F**	0.08U
LS-6	3/3/2008	0.12U	0.07U	0.08U	**1.27F**	0.05U	0.08U
LS-6-A2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-7	3/3/2008	0.12U	0.07U	0.08U	**2.05**	**0.43F**	0.08U
LS-7-A2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-1	3/6/2008	0.12U	0.07U	0.08U	**0.26F**	0.05U	0.08U
OFR-3	3/3/2008	0.12U	0.07U	0.08U	**4.41**	**3.38**	0.08U
OFR-3-A2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-4	3/6/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10	3/3/2008	0.12U	0.07U	0.08U	**4.43**	**3.27**	0.08U
RFR-10-A2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10-B2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-11	3/3/2008	0.12U	0.07U	0.08U	0.06U	**0.08F**	0.08U
RFR-11-A2	3/3/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-12	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-14	3/6/2008	0.12U	0.07U	0.08U	**0.18F**	0.05U	0.08U
RFR-4	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-4 FD	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-5	3/4/2008	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U

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

This table presents full analytical results.
All samples were analyzed by APPL, Inc.
All 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.