



# Camp Stanley Storage Activity Groundwater Contamination – December 2005 Sampling FACT SHEET

No. 25 – March 2006

*The purpose of this Fact Sheet is to provide an overview of the quarterly groundwater sampling conducted in December 2005. Results for all groundwater sampling events are available in the Camp Stanley Storage Activity Environmental Encyclopedia located at the downtown San Antonio Public Library, 600 Soledad Street, on the 2nd floor behind the Reference Desk in the Government Documentation Section, or on the internet at [www.stanley.army.mil](http://www.stanley.army.mil).*

## On-post Groundwater Monitoring

On-post groundwater monitoring has been conducted since 1991 as part of the Camp Stanley Storage Activity (CSSA) environmental program. The wells sampled include drinking water, monitoring, and agriculture/livestock wells. Metals analysis for arsenic, cadmium, lead, barium, chromium, copper, nickel, zinc, and mercury is conducted every nine months for the on-post drinking water wells and annually for the on-post monitoring and agriculture wells. All active on-post wells are analyzed semi-annually, every nine months, or biennially for volatile organic compounds (VOCs). VOCs are substances such as paint thinners, dry cleaning solvents, and some constituents of petroleum fuels (e.g. gasoline and natural gas). VOCs are sometimes accidentally released into the environment, where they can contaminate the soil and groundwater.

Sampling frequencies for the on-post wells are determined by the long-term monitoring optimization (LTMO) study completed in May 2005, as approved by U.S. Environmental Protection Agency (EPA) and Texas Commission on Environmental Quality (TCEQ). Based on the LTMO recommendations, on-post wells are sampled semi-annually, every nine months, or biennially. No on-post wells were scheduled for sampling in December 2005 since all on-post wells had previously been sampled quarterly in 2005 (March, July, and September).

## CSSA Off-post Groundwater Monitoring Plan

CSSA describes its off-post groundwater monitoring plan in its *Off-Post Monitoring Program and Response Plan*, July 2001 (Plan). The goals of this Plan are to confirm that drinking water meets EPA and TCEQ safe drinking water standards, to determine where VOC contamination has migrated, monitor off-post water wells near known CSSA VOC source areas, and respond according to the Plan if contaminant levels in those wells exceed standards. As part of the Plan, 31 off-post wells were sampled in December 2005.

Off-post water wells are selected for sampling based on CSSA's plan to ensure protection of drinking water and to provide information for the environmental program. Factors such as where the well is located, how close it is to areas where other VOCs or metals have been detected, whether the well owner grants access for sampling, and results of previous sampling at the well are all considered.

CSSA takes action if VOC contamination is detected in off-post wells at concentrations greater than 90 percent of the MCL, or above 4.5 parts per billion (ppb) for tetrachloroethene (PCE) and trichloroethene (TCE). This action includes supplying bottled water to the affected residents within 24 hours of the detection, and resampling the well for confirmation. If additional sampling confirms previous test results, CSSA will either install a granular activated carbon (GAC) filter to remove contaminants from the water, or provide the well owner with an alternate water supply for as long as contaminant levels in the well exceed standards. Seven off-post water wells have been fitted with GAC filtration systems: LS-7 (August 2001), LS-6 (August 2001), RFR-10 (two units, October 2001), RFR-11 (October 2001), LS-2/LS-3 (April 2002), and OFR-3 (April 2002).

## December 2005 Groundwater Sampling Results

The locations of all off-post wells sampled in December 2005 are shown on Figure 1. According to the EPA drinking water standards, concentrations below 5.0 ppb for PCE and TCE are considered safe. Table 1 (see back) presents groundwater data for PCE and TCE from December 2005. Only one well, RFR-10, exceeded the MCL for PCE. This well was previously equipped with a GAC filtration system and post GAC results are below the MCL, see the Post-GAC Sampling Results, below. Three wells had PCE and/or TCE detected (LS-6, LS-7, and OFR-3) at concentrations below the MCL of 5.0 ppb. LS-6, LS-7, and OFR-3 were equipped with a GAC filtration system. In all other wells tested, VOC detections were below the applicable MCLs in drinking water and below the laboratory reporting limit for PCE and TCE, specifically.

CSSA will continue to sample both on- and off-post groundwater wells at the frequencies recommended in the LTMO and DQOs. CSSA will continue to coordinate this groundwater monitoring program with the regulatory agencies and other potentially affected parties, including the EPA, TCEQ, Fort Sam Houston, City of Fair Oaks, Fair Oaks Water Utilities, Bexar Metropolitan Water District, Bexar County Commissioners' office, State Representatives' offices, local, state, and federal elected officials, private well owners, and others.

## Post-GAC Sampling Results

Because of the previously detected presence of VOCs, seven off-post wells in the area are equipped with GAC filters. In September 2005 analyses of the post-GAC water samples confirmed that no VOCs were present above the applicable MCLs, and that the GAC units were working properly. Maintenance involving the replacement of carbon for the LS-2/LS-3 GAC which serves the Leon Springs area was performed in September 2005. Maintenance on GAC filtration systems at wells LS-6, LS-7, OFR-3, RFR-10 and RFR-11 was

performed in January 2006. Table 2 presents the results for PCE and TCE from post-GAC water treatment systems sampled. Post-GAC samples are collected every six months and will be collected again in March 2006.

### Source Area Cleanup

Groundwater contamination at CSSA is associated with three VOC source areas. Two source areas, Solid Waste Management Unit (SWMU) B-3 and SWMU O-1, are in the central portion of CSSA and affect the area designated as Plume 1. Cleanup activities at SWMU B-3 and O-1 included excavation and disposal of some of the VOC-contaminated soil and removing gases in the soil (soil vapor extraction [SVE]). In late 2003, over 1,900 cubic yards of VOC-contaminated soil at SWMU B-3 was removed. In February 2004, a new pilot SVE system was installed at SWMU B-3. Area of Concern (AOC)-65, was identified in the southwest corner of CSSA as the other potential source of VOCs, and affects the area designated as Plume 2. An SVE system installed during the summer 2002 is being tested to evaluate its effectiveness and ability to optimize performance. A significant reduction in soil gas concentrations beneath AOC-65 has been observed since initial operation of the SVE system. The SVE system west of Building 90 will be operated for the foreseeable future.

### Public Comment and Future Fact Sheets

CSSA has been issuing fact sheets similar to this Fact Sheet on a quarterly basis since 2000. Future fact sheets will be mailed annually to provide information on sampling results, ongoing investigations, and cleanup activities. Each well owner will continue to receive a separate letter concerning laboratory results for their wells sampled by CSSA.

CSSA will continue to inform the public about various aspects of its environmental program. The public is welcome to comment on this Fact Sheet and the environmental activities at CSSA by writing to:

Installation Manager,  
Camp Stanley Storage Activity  
25800 Ralph Fair Road  
Boerne, Texas 78015-4800

Interested parties may also comment by calling:

- CSSA Installation Manager, Mr. Jason D. Shirley, at (210) 295-7416;
- EPA Regional Program Manager, Mr. Greg Lyssy, at (214) 665-8317; or
- Fort Sam Houston, Public Affairs Office, Mr. Phillip Reidinger, at (210) 221-1151 or (210) 336-0449 (mobile)

**Table 1 - Groundwater Sampling Results  
Off post wells near Plume 1**

Well Number	PCE (ppb)	TCE (ppb)
FO-22	ND	ND
JW-5	ND	ND
JW-7	0.49F	ND
JW-8	0.19F	ND
JW-14	ND	ND
JW-15	ND	ND
JW-26	ND	ND
JW-27	ND	ND
JW-28	ND	ND
JW-29	0.10F	ND
JW-29 FD	0.14F	ND
JW-30	0.09F	ND
JW-30 FD	0.11F	ND
RFR-3	ND	ND
RFR-7	ND	ND

**Off post wells near Plume 2**

Well Number	PCE (ppb)	TCE (ppb)
HS-2	ND	ND
I10-2	ND	ND
I10-4	ND	ND
I10-5	ND	ND
I10-7	ND	ND
I10-7 FD	ND	ND
I10-8	ND	ND
LS-3	1.12F	0.27F
LS-4	ND	ND
LS-5	ND	0.10F
LS-6	1.51	0.79F
LS-7	2.65	0.30F
OFR-1	0.29F	ND
OFR-2	0.30F	ND
OFR-3	1.99	2.05
RFR-10	<b>7.29</b>	3.26
RFR-11	0.68F	1.43
RFR-12	ND	ND
RFR-13	ND	ND

ND = The VOC was not detected above the method detection limit.  
F = The VOC was not detected above the RL.  
Bold = Concentration > MCL

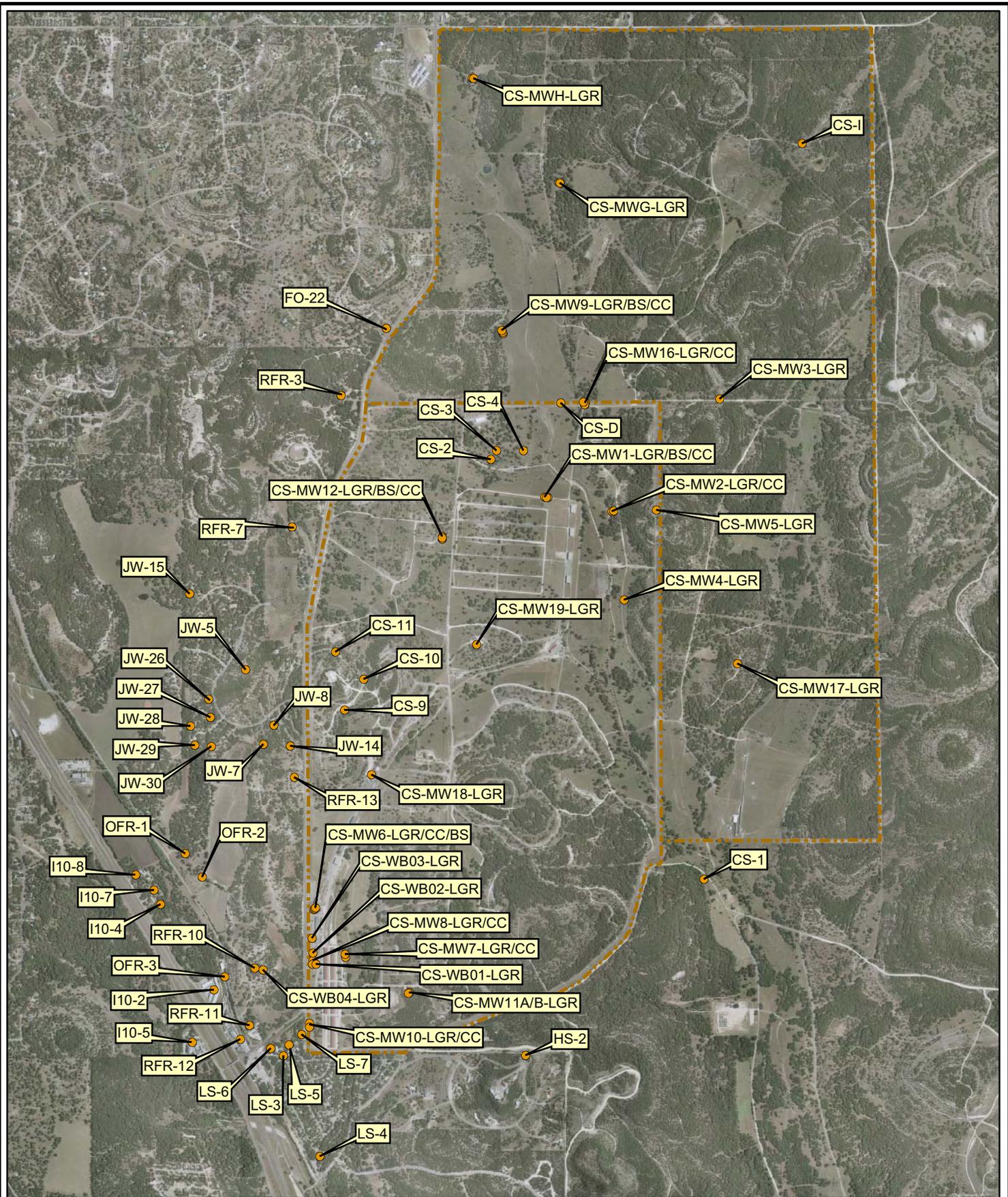


Figure 1

December 2005, Off-Post Well Sampling Locations with On-Post Locations Shown  
Camp Stanley Storage Activity

