



Camp Stanley Storage Activity Groundwater Contamination – September 2005 Sampling FACT SHEET

No. 24 – December 2005

The purpose of this Fact Sheet is to provide an overview of the quarterly groundwater sampling conducted in September 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.

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 quarterly for the on-post drinking water wells and annually for the on-post monitoring and agriculture wells. All active on-post wells are analyzed quarterly for volatile organic compounds (VOCs), which 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.

Laboratory results from September 2005 sampling activities indicate that on-post VOC levels have remained at the same concentrations since the last sampling event. No results for metals were above the appropriate U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL), action level (AL), or secondary standard during the September 2005 sampling event.

CSSA conducted a long term monitoring optimization (LTMO) study for the groundwater sampling program. The EPA advocates LTMO as an evaluation of a monitoring program to improve the effectiveness by assuring that monitoring achieves its objectives with an appropriate level of effort. Under the provisions of the LTMO study, reductions in sampling frequencies for certain wells were recommended. The EPA and TCEQ approved implementation of the LTMO recommendations for on-post wells only for December 2005. No reductions in sampling under LTMO will be initiated at this time for off-post wells.

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 Texas Commission on Environmental Quality (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, 27 off-post wells were sampled in September 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).

September 2005 Groundwater Sampling Results

The locations of all off-post wells sampled in September 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 September 2005. Fourteen wells had VOC detections. Two wells, RFR-10 and OFR-3, exceeded the MCL for PCE and/or TCE. These wells were previously equipped with GAC filtration systems and all post GAC results are below MCL; see post GAC sampling results, below. PCE and/or TCE concentrations detected in LS-2/3, LS-4, LS-6, LS-7, and RFR-11, were below the MCL of 5.0 ppb. Six wells (JW-7, JW-8, JW-30, I10-4, OFR-1, and OFR-2) had trace detections of VOCs below the laboratory reporting limit and below the MCL. In all other wells tested, VOCs were not detected.

CSSA will continue to sample both on- and off-post groundwater on a quarterly basis. 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

In September 2005, analyses of water samples collected after GAC filtration confirmed that no VOCs were present above the applicable MCLs, and that the GAC units were working properly. Maintenance involving the replacement of carbon was performed on the system which serves the Leon Springs area (LS-2/LS-3) in September 2005.

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 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 at 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 issued 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-J1	ND	ND
JW-5	ND	ND
JW-7	0.22F	ND
JW-8	0.25F	ND
JW-14	ND	ND
JW-15	ND	ND
JW-28	ND	ND
JW-29	ND	ND
JW-30	0.11F	ND
RFR-13	ND	ND

**Table 1, cont'd
Off-post wells near Plume 2**

Well Number	PCE (ppb)	TCE (ppb)
HS-2	ND	ND
I10-2	ND	ND
I10-4	0.13F	ND
I10-7	ND	ND
LS-2	1.55	0.55F
LS-3	1.09F	ND
LS-4	ND	ND
LS-5	ND	ND
LS-6	1.96	0.20F
LS-7	3.62	0.31F
OFR-1	0.26F	ND
OFR-1 FD	0.40F	ND
OFR-2	0.16F	ND
OFR-3	9.22	4.73
RFR-9	ND	ND
RFR-9 FD	ND	ND
RFR-10	19.83	8.91
RFR-11	0.66F	1.46
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

Table 2 - GAC System Sampling Results

Well Number	PCE (ppb)	TCE (ppb)
LS-2/LS-3-A1	ND	ND
LS-2/LS-3-A1 FD	ND	ND
LS-2/LS-3-A2	ND	ND
LS-6-A2	ND	ND
LS-7-A2	ND	ND
OFR-3-A2	ND	ND
RFR-10-A2	ND	ND
RFR-10-B2	ND	ND
RFR-10-B2 FD	ND	ND
RFR-11-A2	ND	ND

The MCL for PCE and TCE is 5.0 ppb
ND = The VOC was not detected above the method detection limit.

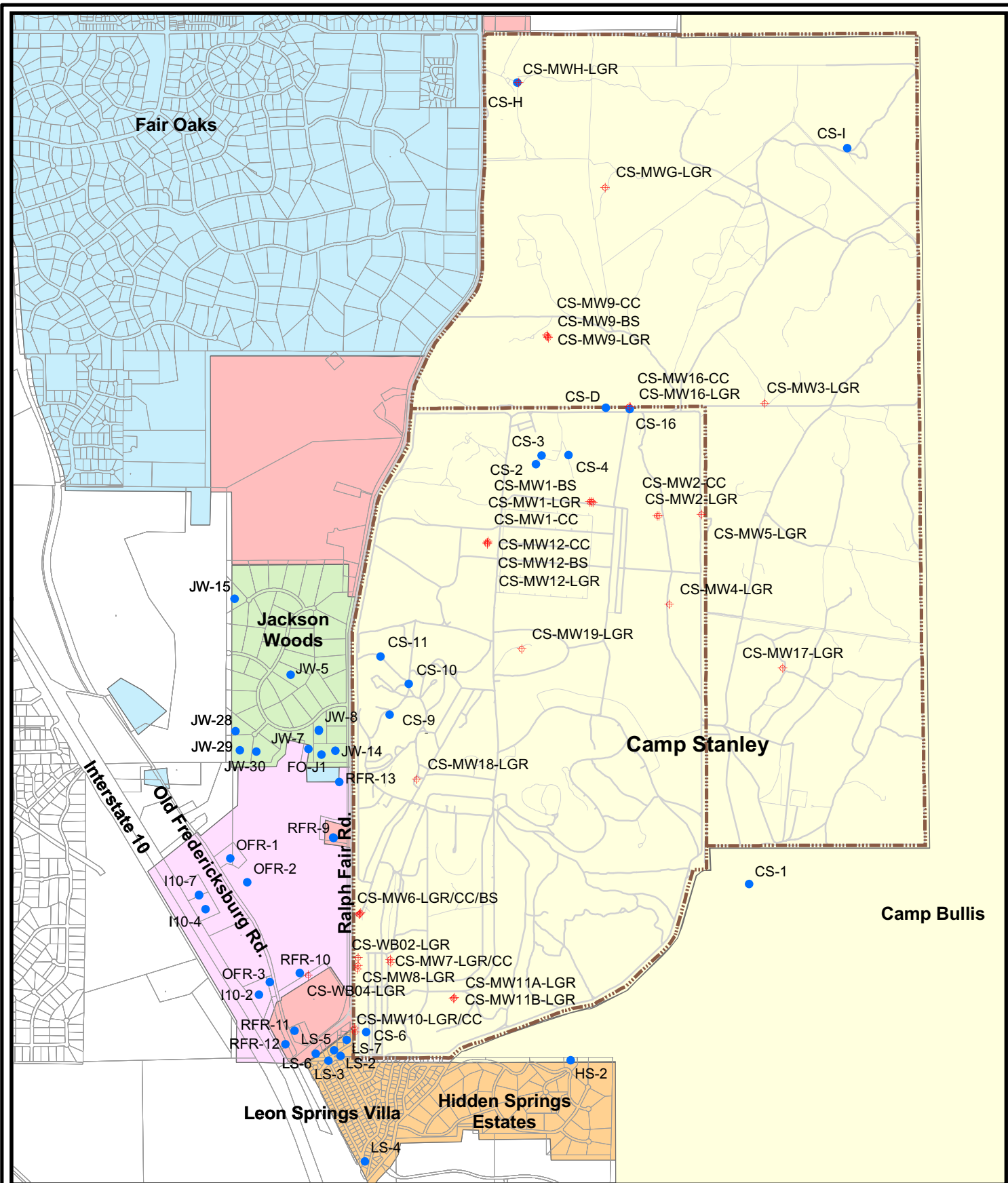
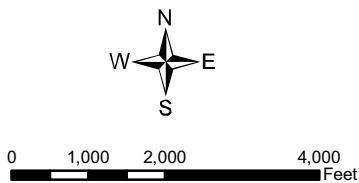


Figure 1

Water Well and Monitoring Well
Locations Sampled in September 2005
Camp Stanley Storage Activity



- Camp Stanley/Camp Bullis
- Ralph Fair Road Corridor
- I-10/Old Fredericksburg Road
- Leon Springs Villa/Hidden Springs Estates
- Jackson Woods
- Fair Oaks
- Water Well Locations
- Monitoring Well Locations