



Camp Stanley Storage Activity Groundwater Contamination – March 2004 Sampling FACT SHEET

No. 18 – May 2004

The purpose of this fact sheet is to provide an overview of the quarterly groundwater sampling conducted in March 2004. Future fact sheets will be issued to provide additional information regarding on-going sampling, investigation, and cleanup activities. The results for all groundwater sampling are available in the Camp Stanley Storage Activity (CSSA) Environmental Encyclopedia located at the downtown San Antonio Public Library, 600 Soledad Street, behind the Reference Desk in the Government Documentation Section on the 2nd floor, 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 agricultural/livestock wells. The laboratory results obtained from the March 2004 sampling indicated minor changes to volatile organic compound (VOC) levels on-post as compared to findings reported in previous fact sheets.

All on-post drinking water wells are analyzed quarterly for the metals arsenic, cadmium, lead, barium, chromium, copper, nickel, zinc, and mercury. All on-post monitoring and agricultural/livestock wells are analyzed for those nine metals annually. The annual on-post metals sampling was last conducted in June 2003, and the on-post drinking water wells were sampled for metals in March 2004. None of the sampled on-post monitoring or on-post drinking water wells had metals results above the appropriate U.S. Environmental Protection Agency (EPA) maximum contaminant level (MCL), action level (AL), or secondary standard.

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 to respond according to the Plan if contaminant levels in those wells exceed standards. As part of the Plan, 32 off-post wells were sampled in March 2004.

Off-post water wells were selected for testing based on continued protection of drinking water and to provide detailed information for the environmental program. Factors such as well location, proximity to other detections, screened interval, sampling access, and previous sampling results were 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 and maintain

a granular activated carbon (GAC) filter which will remove contaminants from the water, or connect the well owner to an alternate water supply for as long as contaminant levels exceed standards. Seven GAC filtration systems have been installed for off-post water wells: 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).

March 2004 Groundwater Sampling Results

The locations of all off-post wells sampled in March 2004 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 analytical data for PCE and TCE from March 2004. Twenty wells had VOC detections. Only one well, RFR-10, exceeded the MCL for PCE and TCE in the March 2004 sampling event. PCE and TCE detected in wells I10-4, LS-6, LS-7, and OFR-3 were below the MCL. All other VOC detections were below the applicable MCLs in drinking water and below the laboratory reporting limit (RL) for PCE and TCE and do not prevent usability of these wells.

CSSA will continue to sample both on- and off-post groundwater on a quarterly basis for the foreseeable future. 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, and others.

March 2004 post-GAC Sampling Results

In March 2004 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. A detection of chloroform was reported in LS-2/LS-3-A2 (0.13 ppb). This concentration was below the reporting limit (RL) and well below the combined MCL for trihalomethanes of 80 ppb for chloroform. Chloroform is a disinfection byproduct related to water treatment in drinking water systems. The GAC filtration system installed at wells LS-2 and LS-3 serves the Leon Springs Villa area. Table 2 presents the results for PCE and TCE from post-GAC wells sampled.

Source Area Cleanup

Groundwater contamination at CSSA is associated with three VOC source areas that have been identified to date. 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 involved past soil vapor extraction (SVE) and removal of over 700 cubic yards of VOC-contaminated soils. Another SVE system has recently been installed. A third source area, Area of Concern (AOC)-65, was identified in the southwest corner of CSSA and affects the area designated as Plume 2. Cleanup activities include installation and

testing of an SVE system, removal of over 600 cubic yards of contaminated soils, and rework of a surface drainage ditch to route rain water run-off away from the site. Testing of the AOC-65 SVE system is being conducted to evaluate its effectiveness and to optimize performance. A significant reduction in soil gas concentrations beneath AOC-65 and/or Building 90 was observed during the initial operation of the SVE system. Testing of the SVE system west of Building 90 is ongoing. The TCEQ concurred with the clean-up approach at AOC-65 on January 28, 2004. Testing of the SWMU B-3 and AOC-65 SVE systems are being conducted to evaluate their effectiveness and to optimize their performance.

Public Comment

CSSA will continue to inform the public about different 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

You 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 west of CSSA

Well Number	PCE (ppb)	TCE (ppb)
FO-J1	0.36F	ND
FO-8	ND	ND
JW-7	0.42F	ND
JW-8	0.35F	ND
JW-9	0.15F	ND
JW-12	ND	ND
JW-14	ND	ND
JW-26	ND	ND
JW-28	ND	ND
JW-29	ND	ND
JW-30	0.15F	ND

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

Table 1, cont'd
Off-post wells southwest of CSSA

Well Number	PCE (ppb)	TCE (ppb)
DOM-2	ND	ND
HS-2	0.14F	ND
I10-2	ND	ND
I10-4	2.22	0.87F
LS-1	0.28F	0.20F
LS-2	0.98F	0.11F
LS-3	1.09F	0.17F
LS-4	ND	ND
LS-5	ND	0.16F
LS-6	3.61	0.47F
LS-7	3.10	0.33F
OFR-1	0.39F	ND
OFR-2	0.35F	ND
OFR-3	2.87	1.98
OFR-4	ND	ND
RFR-3	ND	ND
RFR-4	ND	ND
RFR-5	ND	ND
RFR-10	23.23	10.25
RFR-11	0.99F	1.25
RFR-12	ND	ND

The MCL for PCE and TCE is 5.0 ppb
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 March 2003
Off-post wells

Well Number	PCE (ppb)	TCE (ppb)
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-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.

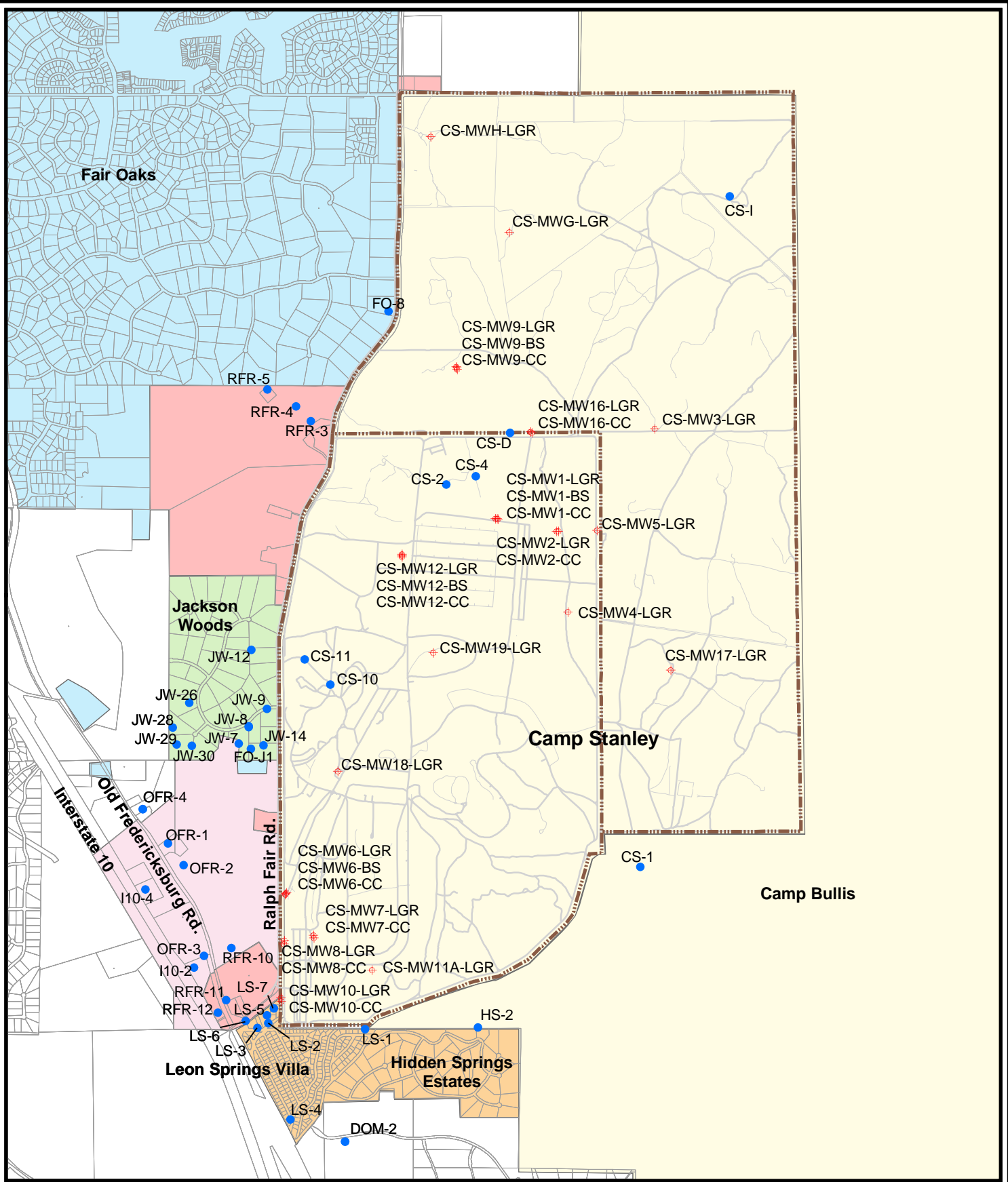


Figure 1

Water Well and Monitoring Well Locations Sampled in March 2004
Camp Stanley Storage Activity



0 1,000 2,000 4,000 Feet

- 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