



Camp Stanley Storage Activity Groundwater Contamination – September 2003 Sampling FACT SHEET

No. 16 – January 2004

The purpose of this fact sheet is to provide an overview of the quarterly groundwater sampling conducted in September 2003. 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 CSSA Environmental Encyclopedia located behind the Reference Desk in the Government Documentation Section on the 2nd floor at the downtown San Antonio Public Library, 600 Soledad Street, San Antonio, Texas, or on the internet at www.stanley.army.mil.

On-post Groundwater Monitoring

As part of the Camp Stanley Storage Activity (CSSA) environmental program, on-post groundwater monitoring has been conducted since 1991. The wells sampled include drinking water, monitoring, and agricultural/livestock wells. The laboratory results obtained from the September 2003 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 also analyzed quarterly for the metals arsenic, cadmium, lead, barium, chromium, copper, nickel, zinc, and mercury. In addition, newly installed wells are sampled the first quarter following their installation for calcium, iron, magnesium, manganese, potassium, and sodium. All CSSA monitoring and agricultural/livestock wells are analyzed for the nine metals once annually. The annual on-post metals sampling was conducted during June 2003. In September 2003, none of the drinking water wells had metals detections that exceeded the 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 approach to off-post groundwater monitoring 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 VOC source areas at CSSA, and to respond according to the Plan if contaminant levels in these wells exceed standards. As part of the Plan, twenty-seven off-post wells were sampled in September 2003.

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, screened interval, and sampling access 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 notification of

detection and resampling the well for confirmation. If additional sampling confirms previous test results, CSSA will 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).

September 2003 Groundwater Sampling Results

The locations of all off-post wells sampled in September 2003 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 September 2003. PCE and TCE in wells LS-2, LS-7 and RFR-11 were below the MCL in September 2003. RFR-10 exceeded the MCL for both PCE and TCE in September 2003. OFR-3 also exceeded the MCL for both PCE and TCE in September 2003. Any off-post well with concentrations exceeding MCLs in the past has been equipped with a GAC filtration system. All other VOC detections were below the applicable MCLs in drinking water 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 many 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.

September 2003 post-GAC Sampling Results

In September 2003 analyses of seven post-GAC water samples confirmed that no VOCs were present above the applicable MCLs, and that the GAC units were working properly. The only VOC detected in post-GAC samples was chloroform, which was detected at LS-2/LS-3-A1 (0.15 ppb) and LS-2/LS-3-A2 (0.17 ppb). These concentrations were below the reporting limit (RL) and well below the combined MCL of 80 ppb for chloroform. Table 2 presents the results for PCE and TCE from post-GAC wells sampled. The A1 and A2 designations after the well number indicate the sample was collected after the first and second GAC canisters, respectively. The GAC filtration system installed at wells LS-2 and LS-3 serves the Leon Springs Villa area.

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 is currently being constructed. 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 the 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/Building 90 was observed during the initial operation. Testing of the SVE system west of Building 90 is ongoing.

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

Table 1 - Groundwater Sampling Results

Off-post wells near Plume 1

Well Number	PCE (ppb)	TCE (ppb)
FO-J1	0.30F	ND
JW-7	0.54F	ND
JW-8	0.29F	ND
JW-9	ND	ND
JW-14	ND	ND
JW-26	ND	ND
JW-26-FD	ND	ND
JW-28	ND	ND
JW-29	ND	ND
JW-30	0.20F	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
 FD = Field Duplicate sample

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

Well Number	PCE (ppb)	TCE (ppb)
HS-2	0.12F	ND
I10-2	ND	ND
I10-4	ND	ND
LS-1	0.24F	ND
LS-2	2.21	0.39F
LS-2-FD	1.70	0.41F
LS-3	1.37	0.14F
LS-4	0.12F	ND
LS-5	ND	0.20F
LS-6	2.49	0.38F
LS-7	3.47	0.34F
OFR-1	0.49F	ND
OFR-2	ND	0.26F
OFR-3	10.82	6.42
OFR-4	ND	ND
RFR-9	ND	ND
RFR-10	23.56	10.07
RFR-10-FD	21.55	9.34
RFR-11	0.99F	1.63
RFR-12	ND	0.14F

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
 FD = Field Duplicate sample

**Table 2 - GAC System Sampling Results
March 2003**

Off-post wells near Plume 2

Well Number	PCE (ppb)	TCE (ppb)
LS-2/LS-3-A1	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-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.

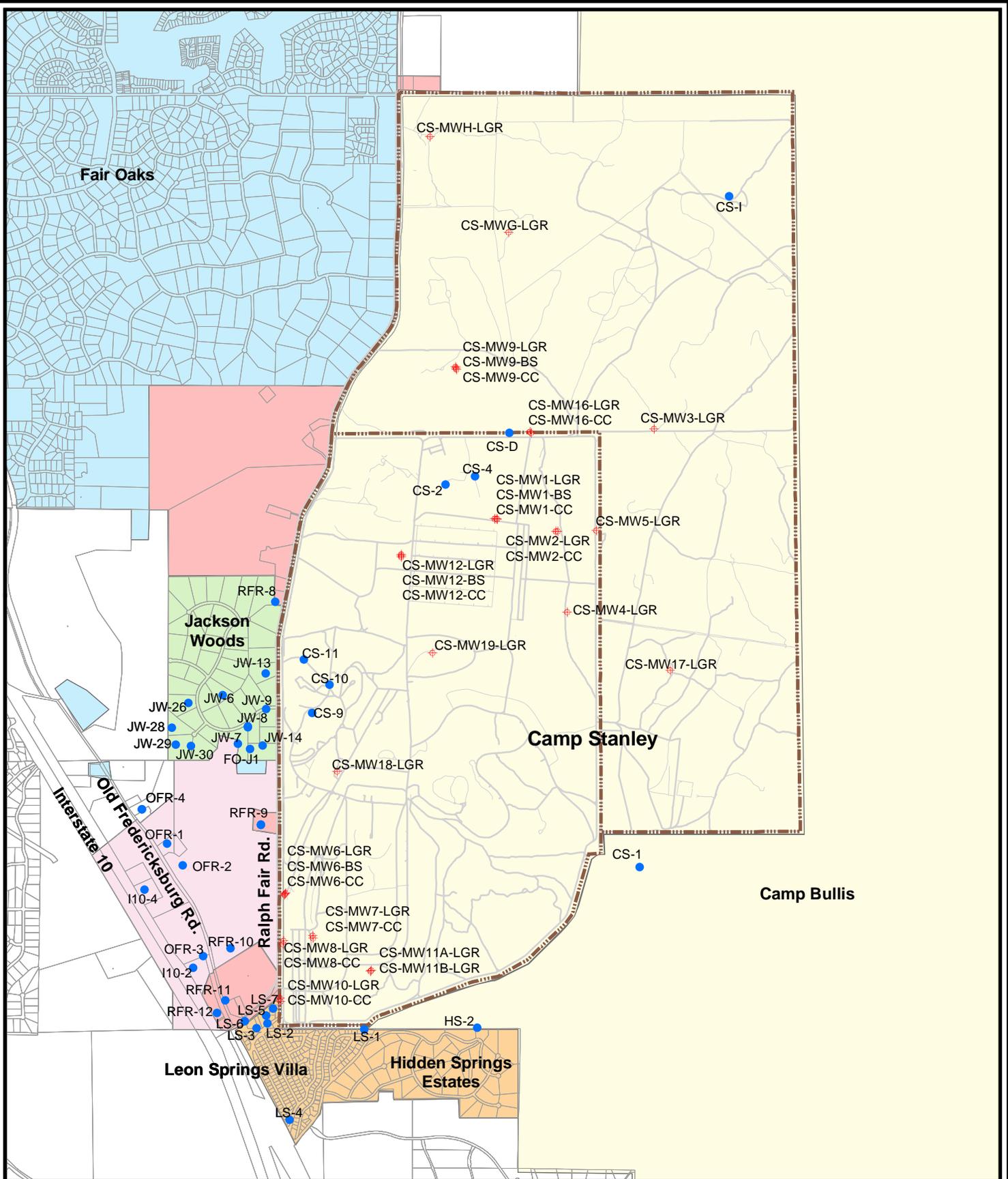
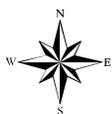


Figure 1.0

Water Well and Monitoring Well
Locations Sampled in September 2003
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



0 1,000 2,000 4,000 Feet