



Camp Stanley Storage Activity Groundwater Contamination – December 2001 Sampling FACT SHEET

No. 6 – April, 2002

The purpose of this fact sheet is to provide an overview of the off-post quarterly groundwater sampling conducted in December 2001. Also included are updates on recent and upcoming investigation and cleanup activities at Camp Stanley Storage Activity (CSSA). The investigation is in response to the detection of volatile organic compounds (VOCs) in groundwater at CSSA. In the past, these compounds were used to degrease and clean metal surfaces. CSSA is continuing to monitor groundwater both on- and off-post. Future fact sheets will be issued to provide additional information regarding on-going sampling, investigation, and cleanup activities.

Background/Mission

CSSA is a U.S. Army post located in Bexar County, approximately 19 miles northwest of downtown San Antonio, Texas. Its mission is the receipt, storage, issuance, quality assurance testing, and maintenance of ordnance materiel. Because of its ordnance mission, CSSA is a controlled-access facility.

On-Post Groundwater Monitoring

As part of CSSA's environmental program, on-post groundwater monitoring has been conducted since 1991. The wells sampled include drinking water, agricultural, and monitoring wells. The laboratory results obtained from the December 2001 sampling indicate no significant change to VOC levels from previous findings reported in Fact Sheets 3, 4, and 5. Of the 26 wells sampled, 15 had no VOC contamination, seven had VOCs below the maximum contaminant level (MCL), and the remaining four wells had VOC levels in excess of the drinking water MCL, which is 5 parts per billion (ppb) for PCE and TCE. Of those four wells, the highest concentrations of VOCs were found in wells CS-16 and CS-D, located near the center of the facility. VOC levels in these wells ranged from 129 to 148 ppb PCE and 165 to 179 ppb TCE. The other two wells located just south of CS-D and CS-16, MW-1-LGR and MW-2-LGR, had concentrations up to 23 ppb PCE, 32 ppb TCE, and 28 ppb cis-1,2 DCE. On-post groundwater monitoring will continue at regular intervals; the results are available in the CSSA Environmental Encyclopedia located at the San Antonio's Main Public Library.

Off-Post Groundwater Monitoring

The CSSA off-post groundwater monitoring program began in 1995, when four off-post wells were sampled. Since 1995, the

program has been expanded. To date, a total of 29 off-post wells have been tested. Off-post water wells were selected for sampling based on proximity to the installation boundary. Factors such as well location, water producing zone, and sampling access were also considered. The locations of all off-post wells sampled in December 2001 are shown on Figure 1 (*see back*).

In December 2001, 20 off-post wells were sampled by CSSA. Three were found to contain no VOC contamination, 15 contained low-levels of VOCs, from 0.12 to 4.30 ppb (less than the MCL), and two were above the MCL. The highest off-post VOC levels were found in wells RFR-10 and RFR-11, located near the southwestern corner of the facility. VOC levels in these wells ranged from 9.02 to 12.44 ppb for PCE and from laboratory detection limits to 5.85 ppb for TCE. Granular activated carbon (GAC) wellhead treatment units were installed on these wells in 2001. In addition to sampling conducted by CSSA, the TNRCC collected a sample from I10-5, which had no detection. A summary table of the December 2001 off-post samples is on the back of this fact sheet.

Site Investigation and Cleanup

Three VOC source areas have been identified at CSSA. SWMU B-3 and SWMU O-1 are located in the central portion of CSSA, and are also in the area known as Plume 1 (*see Fact Sheet 3*). Contaminated soil associated with SWMU O-1 was excavated and taken off-post for proper disposal in August 2000. Trenched wastes at SWMU B-3 will be excavated and disposed of in 2002. The third VOC source area is located near the southwestern corner of the facility and is designated AOC-65. AOC-65 is the likely source of VOCs found in off-post wells in the area known as Plume 2 (*see Fact Sheet 4*). Groundwater and VOCs around AOC-65 may flow through fractures and faults in the rock. To locate these water flow paths, CSSA recently conducted geophysical surveys around AOC-65 using resistivity and micro-gravity techniques. Additional testing will be necessary, however based on the survey results, CSSA is planning to install and test a soil vapor extraction (SVE) system near AOC-65. When exposed to air, VOCs break down into vapors. An SVE system pulls these vapors out of the ground. We plan to place our SVE system near fractures and faults.

To further define the lateral and vertical extent of VOCs in groundwater, CSSA plans to install new monitoring wells from near surface to 500 feet below ground surface and recondition some existing wells during 2002-2003. Fourteen of the new wells and/or re-completions will be placed in the

Lower Glen Rose, Bexar Shale, and Cow Creek members of the Trinity Aquifer.

Other CSSA Fact Sheets

- ?? Fact Sheet No. 1, CSSA's Environmental Program
- ?? Fact Sheet No. 2, CSSA's Soil and Groundwater Contamination
- ?? Fact Sheet No. 3, Groundwater Contamination – Plume 1
- ?? Fact Sheet No. 4, Groundwater Contamination – Plume 2
- ?? Fact Sheet No. 5, Groundwater Contamination – September 2001 Sampling

Public Comment

The public is welcome to comment on this fact sheet and the environmental activities at CSSA by writing to:

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

Figure 1 - December 2001 Off-post Monitoring Locations

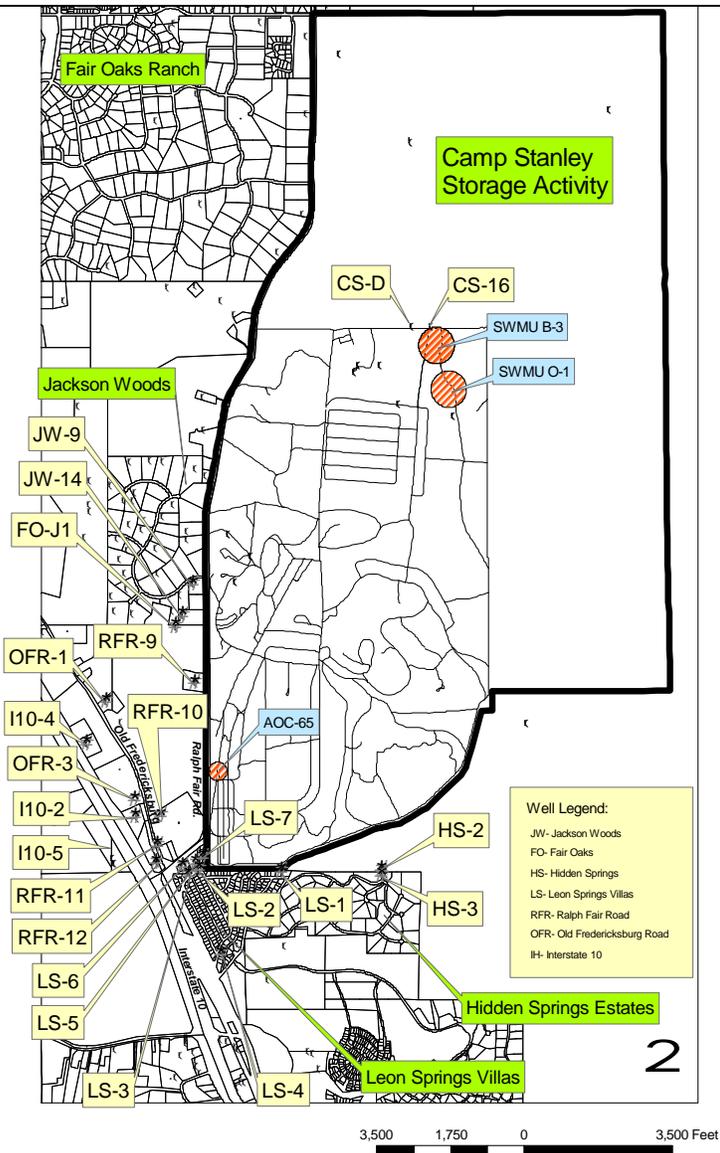


Table 1 - Sampling Results from December 2001

| Off-post wells near Plume 1 | | | |
|-----------------------------|--------------|-------------|-------------|
| Well Number | PCE | TCE | cis-1,2 DCE |
| | (ppb) | (ppb) | (ppb) |
| JW-9 | ND | ND | 0.33 |
| JW-14 | ND | ND | ND |
| FO-J1 | ND | ND | 0.30 |
| RFR-9 | ND | ND | ND |
| OFR-1 | 0.42 | ND | ND |
| I10-4 | 0.12 | ND | ND |
| I10-5 | ND | ND | ND |
| Off-post wells near Plume 2 | | | |
| OFR-3 | 1.90 | 2.20 | ND |
| RFR-10 Pre-GAC | 9.02 | 5.85 | 0.26 |
| RFR-10 Post-GAC | ND | ND | ND |
| RFR-11 Pre-GAC | 12.44 | ND | ND |
| RFR-11 Post-GAC | ND | ND | ND |
| RFR-12 | ND | 0.15 | ND |
| I10-2 | 0.16 | 0.22 | ND |
| LS-1 | 0.65 | 0.26 | ND |
| LS-2 | 3.50 | 0.20 | ND |
| LS-3 | 4.30 | 0.27 | ND |
| LS-4 | 0.23 | ND | ND |
| LS-5 | ND | 0.32 | ND |
| LS-6 Pre-GAC | 1.97 | ND | ND |
| LS-6 Post-GAC | ND | ND | ND |
| LS-7 Pre-GAC | 1.40 | ND | ND |
| LS-7 Post-GAC | ND | ND | ND |
| HS-2 | 0.16 | ND | ND |
| HS-3 | ND | ND | ND |

ND - Not Detected above MDL.

Pre-GAC – Wellhead Sample

Post-GAC – Sample taken after GAC treatment

Bold - Greater than MCL

MCL for PCE and TCE = 5 ppb

MCL for cis 1-2 DCE = 70 ppb

You may also comment by calling:

- ?? CSSA Commander, LTC Jason D. Shirley, at (210) 295-7416;
- ?? EPA Regional Program Manager, Mr. Greg Lyssy, at (214) 665-8317; or
- ?? U.S. Army Corps of Engineers, Fort Worth District Public Affairs Office, Ms. Anita Horky, at (817) 978-3395

Definition of terms:

cis 1, 2 DCE cis-1,2 Dichloroethene
AOC Area of Concern, area of potential or suspected environmental concern.

CSSA Camp Stanley Storage Activity

GAC Granular Activated Carbon

MCL Maximum Contaminant Level

MDL Method Detection Limit

PCE Tetrachloroethene

Plan Off-Post Monitoring Program and Response Plan

SWMU Solid Waste Management Unit

TCE Trichloroethene

VOC Volatile Organic Compound