



Camp Stanley Storage Activity Cleanup Activities at SWMU B-3 and AOC-65 FACT SHEET

No. 10 – October 2002

This Fact Sheet provides an overview of the recent cleanup activities at solid waste management unit (SWMU) B-3 and area of concern (AOC) -65 at Camp Stanley Storage Activity (CSSA). This fact sheet provides detailed information about the cleanup activities completed or underway at these two units. Cleanup activities at SWMU B-3 involved removal of contaminated soils. Cleanup activities at AOC-65 involve installation and testing of a soil vapor extraction (SVE) system, removal of contaminated soils, and changes to surface drainage. Future fact sheets will provide information regarding additional cleanup activities.

Background/Mission

CSSA is a U.S. Army restricted access installation located in Bexar County, approximately 19 miles northwest of downtown San Antonio, Texas. Its mission is to receive, store, and issue ordnance materiel as well as quality assurance testing and maintenance of military weapons and ammunition.

SWMU B-3

SWMU B-3 was a landfill area primarily used for garbage disposal, and trash burning. The unit includes trench areas that were reportedly covered circa 1990. SWMU B-3 covers approximately three acres and is located in the Inner Cantonment, near the center of the installation (Figure 1). The presence of volatile organic compounds (VOCs), such as perchloroethene or tetrachloroethene (PCE) and trichloroethene (TCE) in soil and soil gas samples collected from this site in 1995 and 1996 identified SWMU B-3 as a potential source area for PCE/TCE groundwater contamination (see Fact Sheet No. 3, October 2001).

In 1996, a pilot test was performed to evaluate the use of SVE as a cleanup technology. An SVE system pulls VOC vapors from the ground to cleanup soils. The initial pilot test demonstrated that an SVE system operated at the site could successfully reduce VOC concentrations. The SVE system was expanded by adding 12 additional vapor extraction wells and was operated intermittently until August 2002. CSSA estimates that 500 pounds of VOCs, equivalent to approximately one drum of solvent, were removed during its operation period.

In late August 2002, CSSA initiated a removal action at SWMU B-3. The removal action is in progress and includes excavation and off-post disposal of the contaminated material from former landfill trenches. An estimated 24,000 cubic yards of soil and debris will be removed and sent to a TCEQ approved landfill facility. Summary reports documenting the B-3 activities will be prepared following completion of the removal activities. CSSA continues to develop plans for future corrective actions at SWMU B-3 to address residual contamination that remains in the bedrock material and groundwater.

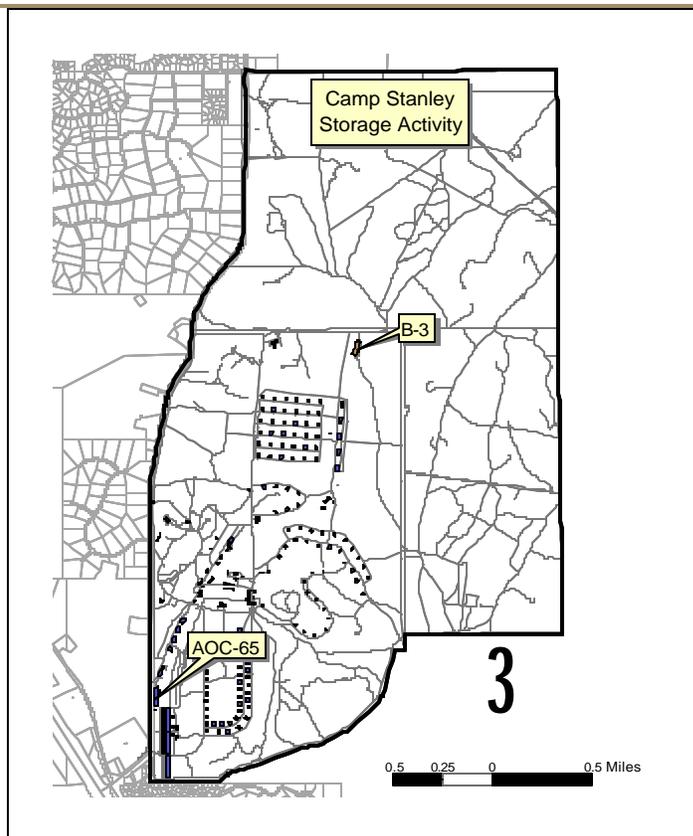


Figure 1

AOC-65

AOC-65 consists of Building 90 and surrounding areas. CSSA used PCE and TCE to degrease metal parts at Building 90 until 1995. AOC-65 was identified as a potential source area of PCE contamination detected in an off-post residential well in August 1999. Investigations conducted from January through April 2001 determined that soil below, to the west, and to the south of Building 90 was impacted with PCE and TCE. In June 2001, PCE and TCE were detected at concentrations above TCEQ drinking water standards in shallow groundwater samples collected at AOC-65. AOC-65 is the only known source of VOC contamination in groundwater in the southwest corner of the post (see Fact Sheet No. 4, October 2001). In addition, the Army has installed wellhead treatment systems on private and public water supply wells to ensure public safety.

To provide a better understanding of how VOCs move into the productive zone of the aquifer, CSSA conducted many forms of geophysical investigations to identify faults, fractures, and caves within the bedrock unit that may be influencing the flow and recharge of groundwater and contaminants beneath the site. Results of the investigations have identified the presence of two fault zones trending northeast to southwest through the area (Figure 2).

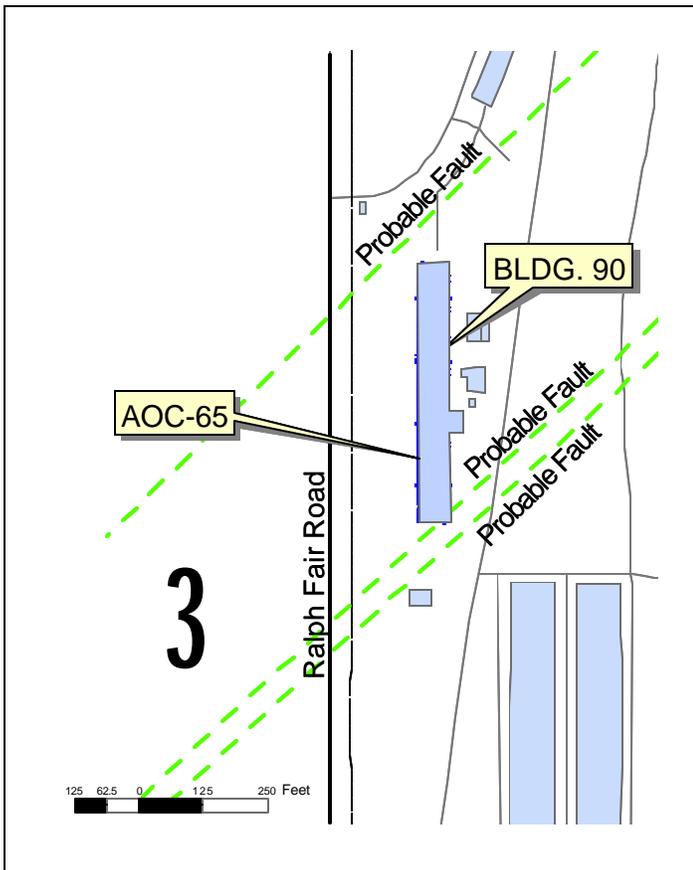


Figure 2

A shallow SVE system was installed into the concrete floor of Building 90 to reduce the VOC levels to a depth of approximately 15 feet beneath the building. Initial startup and testing of the system will be evaluated in late October 2002 to determine how effective it will be at reducing the VOC levels present in the soil and rock beneath the building.

CSSA also installed an SVE system to address VOC contamination outside Building 90. The system was designed to evaluate cleanup of VOCs from the upper 60 feet of the fractured bedrock adjacent to the building. Seven vapor extraction wells were installed with the extraction points set at various depths to assess removal of contaminants from different subsurface intervals and interconnectivity of fractures. In addition, seven multiple depth vapor monitoring points were installed and will be used to monitor effectiveness of the SVE system. Locations for the extraction wells and monitoring points were selected to intersect subsurface fractures and faults identified during the geophysical investigations.

A weather station and six groundwater wells/piezometers were installed for a groundwater study to be initiated by CSSA to become more familiar with how groundwater recharge influences contaminant movement in the local groundwater. The weather station is equipped with numerous meteorological sensors such as a rain gauge, barometer, thermometer, and wind speed indicator, connected to a data recorder. The system will also include pressure sensors installed in the piezometers to monitor fluctuations of groundwater levels.

In August 2002, approximately 600 cubic yards of impacted soil material was excavated from an area west of Building 90 and sent to a TCEQ approved landfill for disposal. The purpose of this action was to remove contaminated surface soils that may be affecting groundwater in the area. The excavated area has been backfilled with clean fill material.

CSSA completed a re-engineering of the Building 90 roof drains and drainage ditch on the west and north sides of the building. This task was completed to minimize the amount of water flowing through the impacted bedrock material which can flush low levels of PCE and TCE to the local groundwater supply. An unlined ditch along the west and north side of the building was lined with concrete to prevent seepage from the ditch. Also, roof-drains from the building were diverted away from the building to further reduce infiltration of water through the impacted material.

CSSA will evaluate data collected from rain events, water levels, and the SVE system to determine effective treatment technologies for reducing VOC levels in the groundwater.

Public Comment

All CSSA Fact Sheets are available from the contacts listed below. CSSA will distribute additional Fact Sheets 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:

Commander, Camp Stanley Storage Activity
 25800 Ralph Fair Road
 Attn: Environmental Office
 Boerne, Texas 78015-4800

The public 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:

AOC	Area of Concern, an area of potential or suspected environmental concern.
CSSA or CS	Camp Stanley Storage Activity
PCE	Tetrachloroethene
PLUME	A two dimensional area below the surface defined by measurable levels of a groundwater contaminant originating at a given point.
SVE	Soil vapor extraction is a remediation technology that removes subsurface volatile organic compound contamination that is contained in soil gas.
SWMU	Solid Waste Management Unit is a regulatory designation for a known area of waste disposal or contamination of potential environmental concern.
TCE	Trichloroethene
TCEQ	Texas Commission on Environmental Quality
VOC	Volatile organic compound