

# Bandera Road Ground Water Plume BEXAR COUNTY LEON VALLEY, TEXAS



**EPA REGION 6**  
CONGRESSIONAL DISTRICT 20

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Site ID: 0606565

The U.S. Environmental Protection Agency (EPA) conducted a vapor intrusion study in the area around a former dry cleaning facility in late January. Vapor intrusion can occur when volatile organic contaminant (VOC) vapor from contaminated soil or groundwater seep through cracks and holes in foundations or slabs of buildings and accumulate in basements, crawl spaces or living areas, as shown in the figure below.

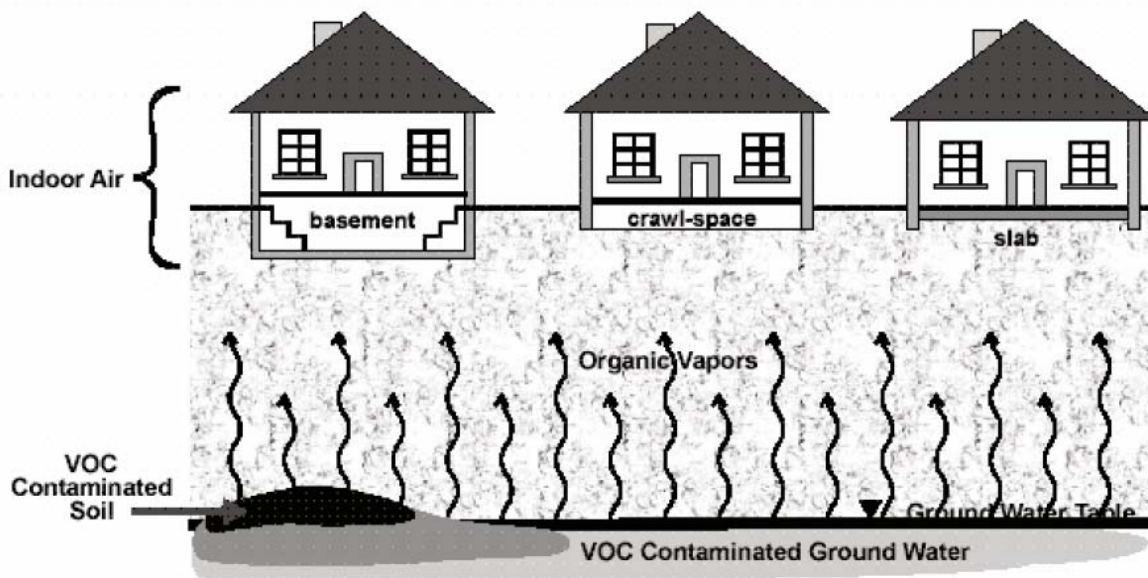


Diagram adapted from US EPA's Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Ground Water and Soils, November 2002.

EPA contractors collected indoor, sub-slab and crawl space air samples to determine if tetrachloroethylene (PCE) and other chlorinated solvent vapors are present. Air samples were collected in and around a former dry cleaner facility. The information from this investigation was presented to building tenants where sampling occurred at a meeting at the Leon Valley Community Center in March. At EPA's request, the Texas Department of State Health Services (TDSHS) conducted a Health Consultation based on their review of the indoor air vapor intrusion sampling data. TDSHS concluded in their Health Consultation that with the exception of the building space of the former dry cleaner, the other occupied spaces pose no apparent public health hazard. The EPA issued a Field Consent Order to the previous property owner where the former dry

cleaner operated to take actions to mitigate potential problems identified during the vapor intrusion investigation. The previous owner has installed two sub-slab venting ports at the former dry cleaning location and is taking additional steps to address vapor intrusion.

The EPA had six Austin Chalk ground water monitoring wells installed in the area. The six Austin Chalk wells were installed to a depth of approximately 175 feet below ground surface. Two Edward Aquifer wells were also installed. These wells will be used to further define the extent of groundwater contamination in the area. The location and elevations of all new wells were surveyed. Well data-loggers were also installed in the wells to collect water level, temperature and conductivity readings. During the first week of May, the Edwards Aquifer Authority conducted geophysical logging of the newly installed wells. This information will be evaluated to obtain a better understanding of the geology and hydrology in the area.

In April, May, and June water samples from wells in the Bandera Road /Grissom Road/ El Verde Road Area were collected. In addition, the two Leon Valley municipal water wells and newly installed Austin Chalk and Edward Aquifer wells were also sampled. The Leon Valley municipal water supply wells have been sampled by the EPA on a monthly basis since last September 2008 to ensure the local public water supply has not been impacted. The next water sampling event is planned for the third week in July. In addition to the water samples, soil samples were collected around the site of a former dryer cleaner in April.

In April, four private wells were plugged and abandoned. Three of these wells were determined to be acting as pathways for contaminants to migrate from overlying water bearing formations into the Edwards Aquifer.

#### EPA Enforcement Activities:

- CERCLA 104(e) information request letters were sent to gather information regarding potential contaminant sources.
- Continue efforts to identify source(s) of contamination.
- Field Consent Order issued to owner of former dry cleaner to address vapor intrusion.

## **Benefits** \_\_\_\_\_

The purpose of EPA's remedial investigation is to identify the nature and extent of ground water contamination and potential vapor intrusion exposure pathways. This information will be used in developing remediation strategies to address potential risks posed by the impacted soils and ground water.

## **National Priorities Listing (NPL) History** \_\_\_\_\_

NPL Inclusion Proposal Date: September 26, 2006

NPL Inclusion Final Date: March 7, 2007

## **Site Description** \_\_\_\_\_

The Bandera Road Groundwater Plume site is situated in Bexar County, in the City of Leon Valley, in the northwestern section of the City of San Antonio, Texas. The current estimated site area is approximately one mile long by one-half mile wide. The plume is centered in a business area, with some homes nearby, between Poss Road and Grissom Road, southwest of Bandera Road. Ongoing sampling and investigation may affect the estimated plume extent.

The site consists of a groundwater plume contaminated with PCE, trichloroethene (TCE), and

cis-1,2-Dichloroethene (cis-1,2-DCE). The site was identified through assessment activities conducted by the TCEQ Voluntary Cleanup Program. The investigation identified the presence of PCE and/or TCE concentrations above the Federal Drinking Water Standard of 5.0 parts per billion (ppb). Two City of Leon Valley public water supply wells are within one mile of the center of the contamination plume. These two public water supply wells are being sampled by EPA on a monthly basis to ensure these municipal water wells have not been impacted by the contamination.

## **Wastes and Volumes**

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The site is being evaluated as a groundwater plume containing PCE, TCE and cis-1,2-dichloroethene (cis-1,2-DCE). To date, ten wells were found to be contaminated with PCE and/or TCE at or above the 5.0 parts per billion. Three of these wells were Edwards Aquifer wells which have been plugged and abandoned. An additional well which was located at an automotive repair facility was also plugged and abandoned. The remaining six wells are completed in formations above the Edwards Aquifer.

The most impacted well is an Austin Chalk monitoring well located by a former dry cleaning facility in which PCE concentrations as high as 11,700 ppb have been detected.

## **Health Considerations**

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Human exposure to contaminated ground water is currently prevented by having provided hook-ups to the local public water supply for residences whose wells were found to be contaminated with PCE/TCE above the Federal drinking water standards. Water well sampling is continuing to ensure additional wells are not being impacted. As discussed previously, vapor mitigation efforts are being taken to address vapor intrusion in the area around a former dry cleaning facility.

## **Record of Decision (ROD)**

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A Record of Decision will be issued following completion of the Remedial Investigation/Feasibility Study. There will an opportunity for the community and interested parties to review the data and comment on the preferred remedy identified by the EPA.

## **Site Contacts**

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TCEQ Project Manager	Danille Soule	512-239-0158

EPA Superfund Region 6 Toll-Free Number: 1-800-533-3508

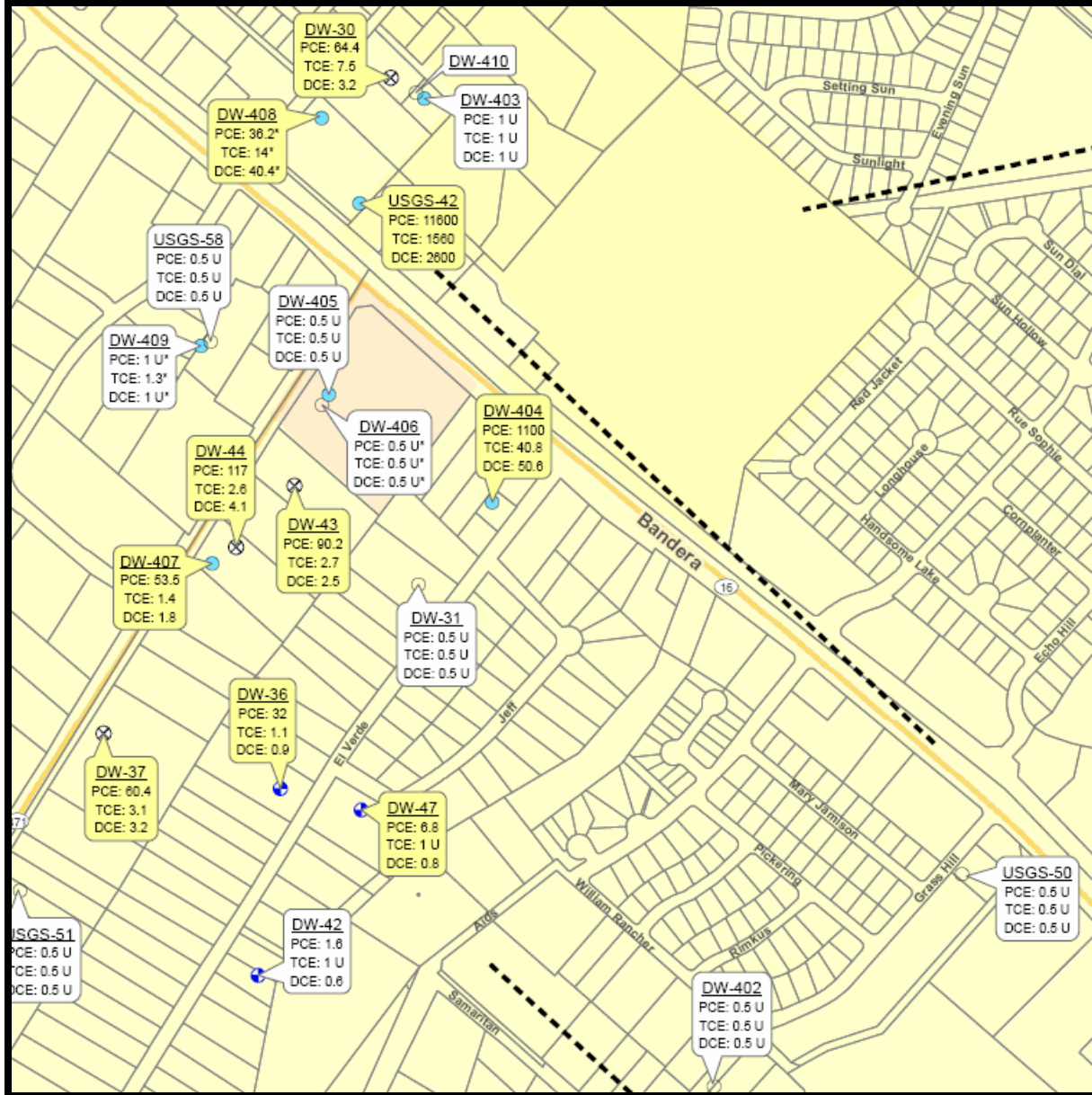
## **Site Figure**

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





Figures 1 shows the maximum PCE/TCE/Cis-1,2-Dichloroethene detections in ground water for 2009.

# **Figure 1**

# 2009 Ground Water Investigation Maximum Concentrations



## Legend

Austin	
Edwards	
Austin/Buda	
Wells Plugged and Abandoned in April 2009	
Potential Fracture Traces	
Parcels	

### Notes:

- 1) All concentrations shown in micrograms per liter ( $\mu\text{g/L}$ )
- 2) \* Denotes preliminary data
- 3) Shaded cells denote maximum contaminant level exceedences

### Acronyms:

PCE - Tetrachloroethene  
TCE - Trichloroethene  
DCE - cis-1,2-Dichloroethene

