

Bandera Road Ground Water Plume BEXAR COUNTY LEON VALLEY, TEXAS



EPA REGION 6
CONGRESSIONAL DISTRICT 20

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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.

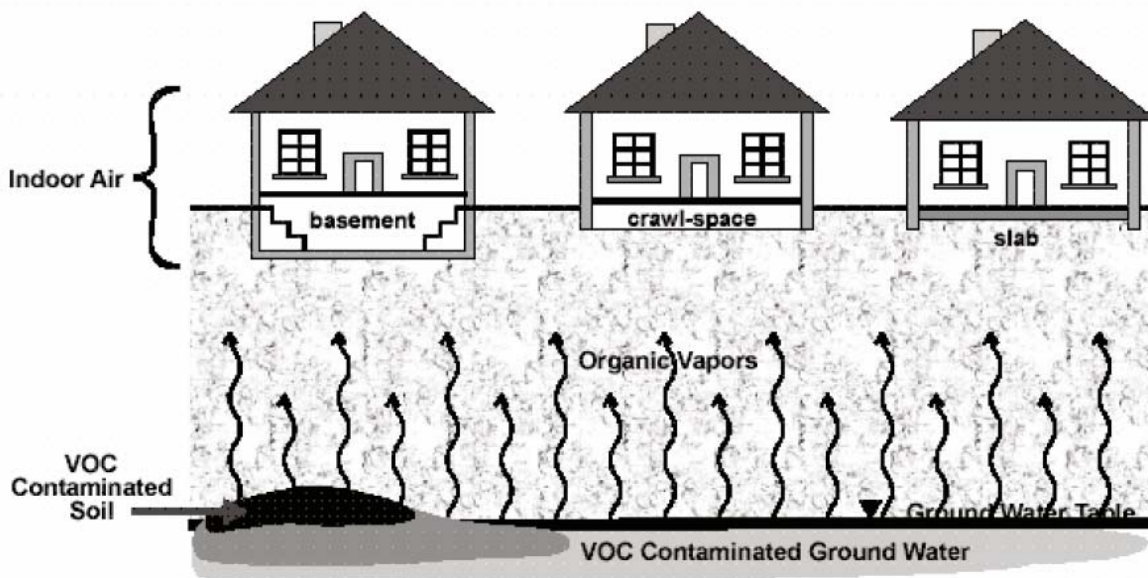


Diagram adapted from US EPA's Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Ground Water and Soils, November 2002.

The EPA's initial vapor intrusion investigation began the week January 12, 2009. 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 took place at a March 10th meeting at the Leon Valley Community Center. 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 has

contacted the current and previous property owners where the former dry cleaner operated to take actions to mitigate potential problems identified by the vapor intrusion investigation.

The EPA had six Austin Chalk ground water monitoring wells installed in the area. The six Austin Chalk wells were installed to an depth of approximately 175 feet below ground surface. These wells will be used to determine aquifer characteristics (i.e., flow rate, response to pumping, etc.). In addition, two Edward Aquifer wells have been installed.

An air rotary drilling rig was utilized to install the monitoring wells. In addition to the drilling rig, there was a few support vehicles (trucks, trailers, etc.) that assisted in the drilling effort. Drilling wells can be a dusty and noisy endeavor. Therefore, water was added to the borehole to suppress the dust during the drilling activities. Although this preventative measure did not totally eliminate all dust created during the drilling process, it significantly reduced the amount of dust created. Air monitoring was performed to ensure that dust and vapors were within safe levels within the work zone.

In the week of April 6th, water samples from wells in the Bandera Road /Grissom Road/ El Verde Road Area were collected. In addition to these wells, 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. In addition, soil samples were collected around the site of a former dryer cleaner.

In mid-April, five existing Edwards Aquifer wells were plugged and abandoned. These wells were found to be pathways for contaminants to migrate from overlying water bearing formations into the Edwards Aquifer.

Additional activities planned for the next few months include:

- Installing data-logger probes in select existing wells;
- Characterizing subsurface soil contamination; and
- Conducting a dye tracer study the assistance of the Edwards Aquifer Authority.

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.

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 have been sampled by EPA for over a year on a quarterly basis and are now being sampled by the EPA on a monthly basis to ensure these municipal water wells have not been impacted by the contamination.

Wastes and Volumes

The site is being evaluated as a groundwater plume containing PCE, TCE and cis-1,2-dichloroethene (cis-1,2-DCE). To date, six wells are known to be contaminated with PCE and/or TCE at or above the 5.0 ppb MCL. With the exception of one well, the highest observed PCE concentration in these wells is 115.2 parts per billion (ppb), and 5.76 ppb for TCE. One Austin Chalk monitoring well located by a former dry cleaning facility has had PCE concentrations as high as 11,700 ppb. Sampling from this well in January 2009 found PCE at a maximum concentration around 10,100 ppb.

Health Considerations

Human exposure to contaminated ground water is currently prevented by having provided hook-ups to a 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 intrusion sampling was conducted in January in the area around a former dry cleaning facility to assess any potential risk from vapor intrusion.

Record of Decision (ROD)

A Record of Decision will be issued following completion of the Remedial Investigation/Feasibility Study. There will be 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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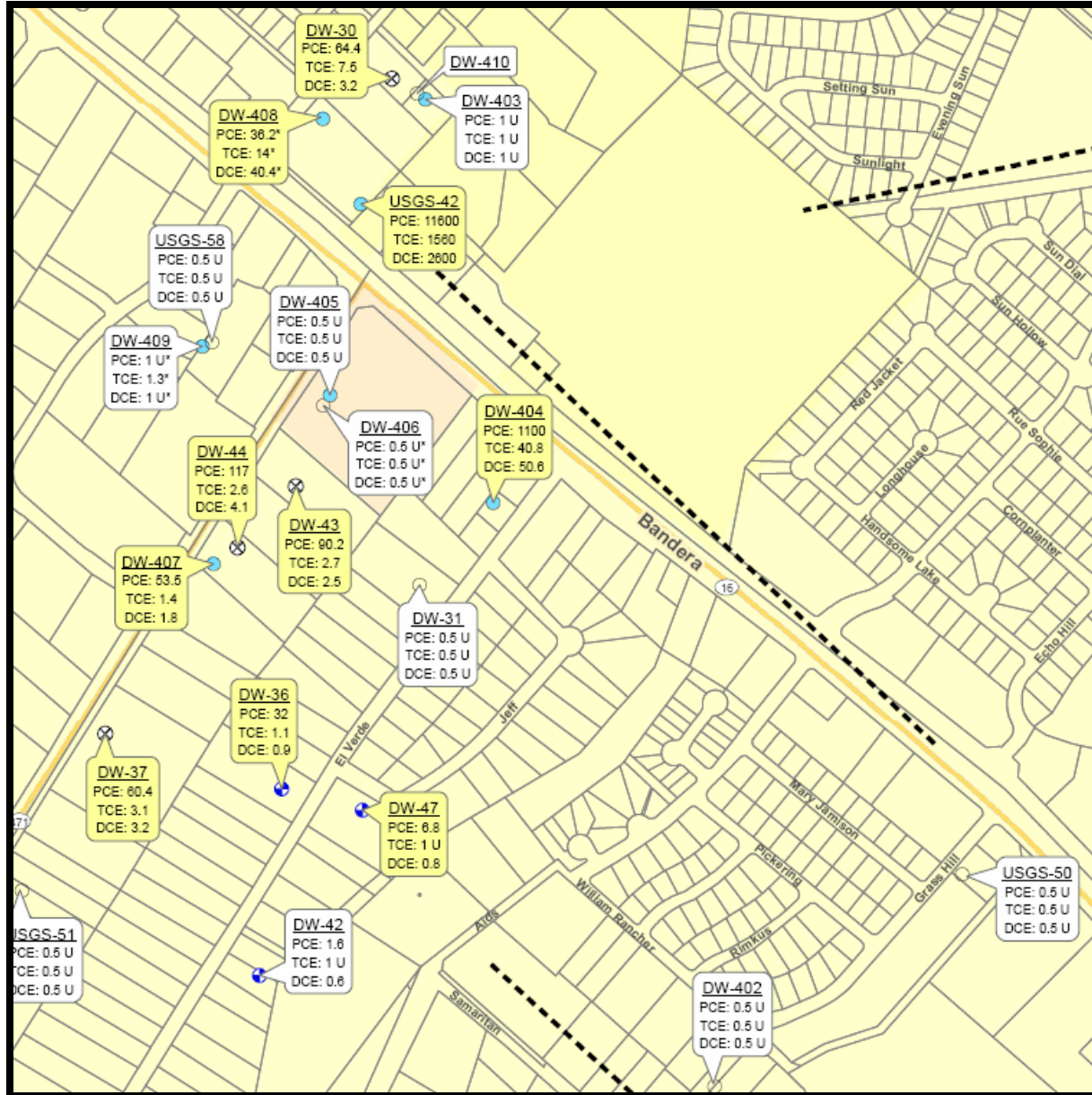
EPA Superfund Region 6 Toll-Free Number: 1-800-533-3508

Site Figure







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

Figure 1

2009 Maximum Groundwater Detections



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

