



[www.epa.gov/superfund/community/tasc](http://www.epa.gov/superfund/community/tasc)

# Bandera Road Ground Water Plume Superfund Site: *March 2014 Information Update*

## About this Document

*At the request of the Bandera Road Community Advisory Group (CAG), this document provides information to Leon Valley residents and workers on the status of the Bandera Road Ground Water Plume (Bandera Road) Superfund site. This update is the ninth in a series.*

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*The Bandera Road CAG includes individuals and organizational representatives from the Leon Valley area. The CAG formed in 2007 to provide input to the U.S. Environmental Protection Agency (EPA) on issues regarding the site's investigation and cleanup. The Bandera Road CAG meets periodically.*

## Site Background

The Bandera Road site includes ground water and soil contaminated with chlorinated solvents, tetrachloroethene (PCE), trichloroethene (TCE) and cis-1,2-dichloroethene (cis-1,2-DCE or DCE), which are commonly referred to as volatile organic compounds (VOCs). PCE is the most frequently detected compound at the site. The area of affected ground water is centered between Poss Road and Grissom Road, southwest of Bandera Road. It extends about one mile in length (north-south) and is a half-mile wide (east-west). The area of most significantly affected ground water is located along Bandera Road between El Verde Road and Huebner Road and between Evers Road and Shady Mist Road. EPA considers two areas along Bandera Road as sources of contamination: the former location of a dry cleaning facility (Source Area 1) and the area by an active dry cleaning facility (Source Area 2).

### Recent and Upcoming CAG Meetings

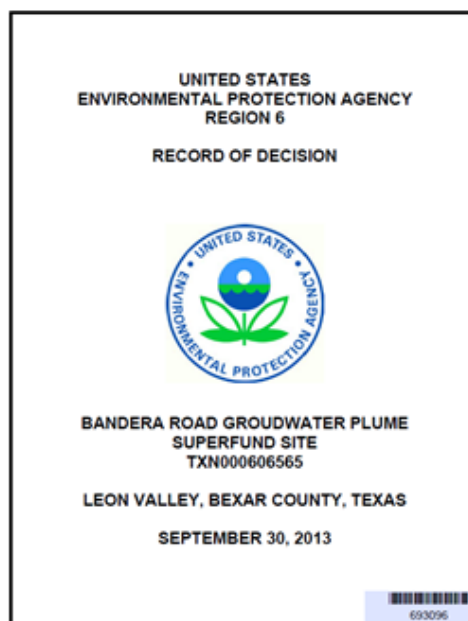
- The last CAG meeting took place on December 12, 2013.
- The next CAG meeting has not been scheduled.
- Contact CAG Chairman John Hoyt for information about future CAG meetings.

## EPA's September 2013 Record of Decision

On July 18, 2011, EPA issued the Bandera Road site's Proposed Plan to gather public input on EPA's preliminary cleanup recommendations for the site. EPA solicited public comment on the Proposed Plan until October 15, 2011. On September 30, 2013, EPA issued the site's Record of Decision (ROD) after considering the public comments as well as input from the Texas Commission on Environmental Quality (TCEQ). EPA briefed the Bandera Road CAG on the ROD on December 12, 2014, at the Leon Valley Community Center.

The site's ROD establishes EPA's cleanup approach for ground water contamination and volatile organic contamination present in indoor air, subsurface soils and shallow bedrock resulting from previous releases of hazardous substances. The ROD includes detailed information about the site's history, enforcement activities, EPA's process for involving the community in site cleanup decisions, site characteristics, the scope of the cleanup, overall cleanup objectives, selected cleanup alternatives, estimated cleanup costs and significant differences between the Proposed Plan and the ROD. The ROD also includes a responsiveness summary, which provides EPA's responses to questions posed by the community and other reviewers about the Proposed Plan.

The following pages include more information about the selected cleanup plan as well as updates on other site activities.



## ROD Overview and Next Steps

### The Cleanup Plan Selected in EPA's 2013 ROD

EPA identified five areas of investigation (AOIs) at the site. Two AOIs contain the areas with primary sources of contamination (AOI 1 and AOI 2). The cleanup approach selected in the ROD will address these AOIs and their respective source areas. Contamination at AOIs 1 and 2 resulted from previous releases of hazardous substances, primarily PCE. AOI 1 includes the Savings Square Shopping Center (6709 Bandera Road), once the location of a dry cleaning facility, and the nearby surrounding area. AOI 1 also includes Source Area 1, an area of impacted soil near and beneath the foundation of Building 1 (B1 in the figure). Building 1 is the office space of the former dry cleaner.

AOI 2 includes an active dry cleaning facility (6600 Bandera Road), an automotive repair facility and the nearby surrounding area. AOI 2 also includes Source Area 2, an area of contaminated soil near and beneath the active dry cleaners. Based on the results of site investigations, EPA does not require cleanup actions at the other three AOIs. As the cleanup progresses, EPA may identify, investigate or monitor additional AOIs as appropriate. The ROD describes all five AOIs.

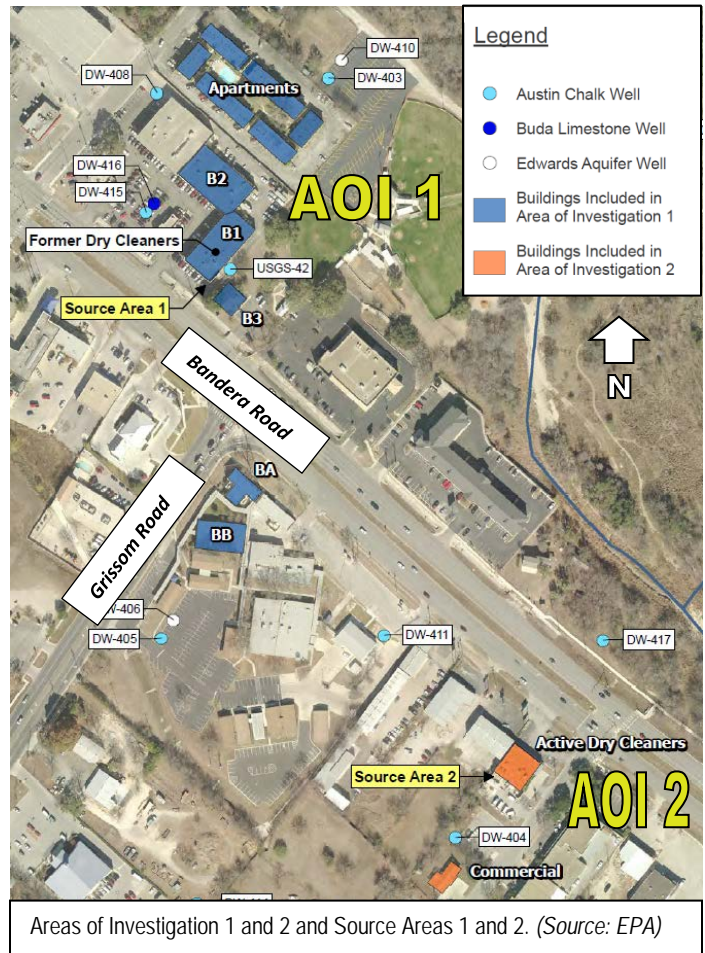
EPA identified three goals to guide the selected cleanup plan: (1) prevent exposure to site-related contamination in ground water and indoor air above cleanup levels; (2) prevent or minimize the further spread of site-related contamination in surface soil, below-ground soil, bedrock above the water table, and ground water above cleanup levels; and (3) return ground water to beneficial use when possible. To achieve these goals, EPA selected several cleanup approaches.

*Indoor Air Vapor in Office Space of Former Dry Cleaner in AOI 1:* Block harmful vapors entering the building through cracks in its foundation by applying a protective impermeable barrier over the foundation. Emissions will be routed away from the building through vapor vents and discharged above the roofline. Periodic indoor air sampling will make sure the approach continues to protect human health.

*Contaminated Surface Soil, Subsurface Soil and Underlying Bedrock Beneath Building 1 in Source Area 1 and at AOI 2:* Remove or reduce concentrations of volatile organic compounds (i.e., PCE and TCE) in soil using a process known as soil vapor extraction, or SVE. SVE systems are designed to capture contaminants that are present in soil in the vapor phase. Periodic soil gas sampling will make sure the approach continues to protect human health. In the Proposed Plan, EPA had planned to address contaminated surface and subsurface soil in Source Area 2 by digging up the material and disposing of it off site. After recalculating health risks using revised EPA toxicity values for PCE and TCE, EPA determined that digging up and disposing of these soils off site was no longer necessary.

*Contaminated Ground Water:* Inject specialized material into the Austin Chalk Aquifer to help chlorinated solvents naturally break down. There would be about 12 injection wells for each of the source areas. The wells would be injected twice, 18 months apart.

Institutional controls are administrative and legal instruments that place restrictions on the use or development of land or ground water (or both) within a defined area. EPA will work with TCEQ to place institutional controls in place as necessary to protect human health. Engineering controls are instruments such as fencing or signs. They minimize access to contaminated areas or areas that may pose a physical hazard. EPA will put these controls in place during the cleanup as necessary to protect human



health. Plugging and abandoning wells are also engineering controls. Under the selected cleanup approach, poorly constructed and abandoned wells will be properly closed. Private well users affected by contaminated ground water may be connected to the public water supply.

Continued monitoring of indoor air, soil gas, and ground water will help EPA identify any need for additional actions. In addition, EPA will evaluate the cleanup approach every five years to make sure it continues to protect human health and the environment.

### Next Steps to Carry Out the Cleanup Plan

EPA is now negotiating with potentially responsible parties to carry out the cleanup plan in the ROD. After negotiations, design and implementation of the remedy will begin. Once negotiations are complete, EPA expects the cleanup process to take from two to five years. EPA may use a phased approach to implement the cleanup plan. In a phased approach, response activities take place in a sequence of steps, or phases, so that information from earlier phases can help inform later investigations, objectives and actions.

### Other Ongoing EPA Activities

#### Ground Water Well Monitoring

EPA continues to collect samples from the two Leon Valley public water supply wells and analyze them for contaminants. EPA has sampled the two wells since September 2008. EPA last sampled the wells in July 2013. Sampling did not detect any VOCs in the wells. EPA plans to sample the wells again in April 2014.

#### Bioremediation Study

Bioremediation is the use of living organisms to break down contamination. In January 2011, EPA began an on-site bioremediation study. EPA applied a specialized material – 3D Microemulsion™ – to Source Area 2 well DW-404. This added hydrogen to the ground water to increase the population of anaerobic microbes (microbes that do not use oxygen); these microbes naturally degrade contaminants to ethane, ethene and other harmless end products. In well DW-404, PCE concentrations went down by more than 98 percent, from 1,570 micrograms per liter (µg/L) in January 2011 to 21 µg/L in January 2012. Follow-up sampling of the well in May 2012 and July 2013 showed that PCE concentrations are now at non-detect levels, below the federal drinking water standard for PCE of 5 µg/L. The site's cleanup will include large-scale bioremediation of ground water near both source areas.

#### Soil Vapor Mitigation

The exterior vapor mitigation system for Building 1 in the Savings Square Shopping Center was installed in March 2009. The system pulls vapor from underneath the building foundation and discharges it to open air; the system has been operating since March 2009. Follow-up indoor air sampling found the concentration of PCE went down substantially between January 2009 and April 2009. Because of mitigation systems and related efforts, such as sealing utility holes in the slab of affected offices, indoor air concentrations continue to decline. Indoor air samples collected for Building 1 during the most recent sampling event in July 2013 show PCE concentrations were within EPA's acceptable risk levels. Indoor air sampling will continue to verify this trend. EPA plans to conduct the next indoor air sampling event in April 2014. As part of the cleanup, EPA will take additional steps to protect Building 1 from soil vapor intrusion. EPA will also use soil vapor extraction to address contaminated soil near and beneath Building 1 in AOI 1 and below and near the active dry cleaning facility in AOI 2.

#### To Learn More about the ROD for the Bandera Road Site

A brief ROD summary will soon be available on the City of Leon Valley's CAG Web page: [www.leonvalleytexas.gov/government/publicworks/cag.php](http://www.leonvalleytexas.gov/government/publicworks/cag.php).

The complete ROD is available on EPA's website:

[www.epa.gov/region6/6sf/6sf-decisiondocs.htm](http://www.epa.gov/region6/6sf/6sf-decisiondocs.htm)

The complete ROD is also available on compact disk at the Leon Valley Public Library.

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Piping used to discharge vapor collected from underneath Building 1 as part of the soil vapor mitigation system at Savings Square Shopping Center.

## Phases of the Superfund Cleanup Process

1. Preliminary Assessment and Site Inspection (PA/SI)
2. National Priorities List (NPL) Listing
3. Remedial Investigation and Feasibility Study (RI/FS)
4. **Proposed Plan – Record of Decision (ROD)**
5. Remedial Design/Remedial Action
6. Construction Completion (CC)
7. Post-Construction Completion
8. NPL Deletion

## Current Status of the Bandera Road Superfund Site

On September 30, 2013, EPA issued the site's Record of Decision, or ROD. The ROD describes EPA's overall cleanup approach to address the site's contamination. EPA is now negotiating with potentially responsible parties to implement the cleanup approach, including performing the remedial design and remedial action.

The remedial design phase will include the development of a final design to guide the cleanup. The remedial design includes a series of documents, drawings, specifications and engineering reports. These materials specify the steps during the remedial action phase to achieve goals outlined in the ROD, clean up the site, and enable EPA to take the site off the NPL.

