EPA Expands Boundaries Based on Sampling Results

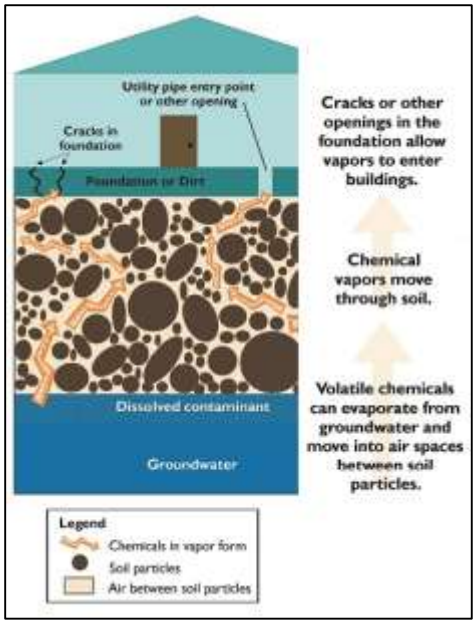
Valley Pike VOC Site
Riverside, Ohio July 2014

The U.S. Environmental Protection Agency has expanded the boundaries for the Valley Pike VOC site (*see Page 2*). Based on Phase 1 sampling results, U.S. EPA included the Forest Home Avenue, Prince Albert Boulevard, Broadmead Avenue and Warrendale Avenue areas. Also, the boundaries were expanded from the 2500 blocks to the 2400 and 2300 blocks of Forest Home Avenue, Guernsey Dell Avenue and Bushnell Avenue. The area of concern now includes 365 residences. U.S. EPA did additional groundwater sampling the week of March 24 to determine the extent of aquifer contamination in the neighborhood. The expanded area of concern was based largely on tests of the groundwater and the Phase 1 air monitoring results.

Since July 2013, U.S. EPA has sampled more than 184 residences and installed 36 vapor abatement systems – similar to systems that control radon. The system includes a sub-slab or crawl space depressurization system, and sealing of cracks in walls and basement floors. After installation, U.S. EPA does proficiency air sampling to ensure the system is working properly.

Vapor intrusion

Vapor intrusion occurs when underground pollutants release chemical vapors that travel up through the soil and accumulate beneath building foundations. Air in the building becomes polluted when vapors enter through cracks or holes in foundations and crawl spaces. Measuring the amount of chemical vapors under the sub-slab or within the crawl space can show whether or not there is a vapor intrusion problem.



Samples are taken from the sub-slab and crawl space. In sub-slab testing, technicians install probes in the slab and attach them to a test canister to sample volatile organic compound, or VOC, vapors trapped under the house. Sampling in crawl spaces is done by placing a test canister inside the crawl space.

Access still needed

Do you want to know if vapor intrusion is a problem in your home? If so, you must sign an access agreement allowing U.S. EPA to test for vapors. If the home is a rental property, both owner and tenant must sign the agreement. The form also allows you to formally deny permission for the testing. If you have not completed an access agreement and live within the site boundaries, contact U.S. EPA (*see box, left*) or come by the local project office as soon as possible. If tests show your home needs a vapor abatement system, U.S. EPA will install it at no cost to you.

For more information

For questions, comments or more information about the Valley Pike VOC site cleanup, contact:

For technical questions:
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For general questions:
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U.S. EPA Chicago office toll-free:
800-621-8431, weekdays,
9:30 a.m. – 5:30 p.m.

Or visit:
www.epa.gov/region5/cleanup/valleypikevocsite.

Contaminants of concern

Tetrachloroethylene, or PCE, and trichloroethylene, or TCE, were used in industrial solvents. Results of a July 2013 sampling project, showed high levels of PCE and TCE in the groundwater and the soil gas beneath the Riverside neighborhood. Elevated PCE and TCE vapors were found under several homes in the neighborhood, and unsafe indoor air concentrations were detected in some residences. The drinking water, which comes from Dayton's public water supply, is not affected.

Health concerns

People can breathe in soil vapor contaminated with PCE and TCE when vapors from beneath a building are drawn through cracks and openings in the foundation and mix with the indoor air. In general, exposure to a VOC does not necessarily mean a person will get sick. Health effects depend on several factors, including inhalation exposure, the length of exposure – short-term, or acute, versus long-term, or chronic – the frequency of exposure, the toxicity of the VOC and the person's sensitivity to the chemical.

This device, called a SUMMA canister, collects sub-slab samples.

This fan outside the house is part of a vapor abatement system.

This aerial photo shows new boundaries of the area under investigation.