

# U.S. EPA Prepares for Emergency Pollution Action

## Mansfield VOC Plume Site

Mansfield, Ohio

June 2015

### For more information

For questions, comments or more information about the Mansfield VOC Plume site and removal action you can contact these U.S. EPA team members:

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**Project Website:**

[www.epa.gov/region5/cleanup/mansfieldvoc/](http://www.epa.gov/region5/cleanup/mansfieldvoc/)

U.S. Environmental Protection Agency this spring and summer will oversee installation of a public water line in a rural neighborhood east of Mansfield to protect people from contaminated private wells. Water line construction is planned to begin in June in an area along the intersection of Bahl Avenue and Erhart Drive in Madison Township, Richland County. The location is bounded by Park Avenue East to the north, Abri Lane to the east, Hickory Lane to the south and Martha Avenue to the west.

### Access agreements needed

U.S. EPA responders are contacting residents in the target area but still need some property owners to sign access agreements. The access agreements will allow officials to make water connections, test private water wells for possible contaminants, and sample soil and indoor air for potential hazardous gases.

U.S. EPA is conducting the work under the emergency authority granted by federal law.<sup>1</sup> The federal Agency designates the project as a “time-critical removal action” because the pollution poses an imminent health



*U.S. EPA is preparing for an emergency action this spring/summer that includes installation of a public water line.*

<sup>1</sup>This response action will be conducted in accordance with Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as the Superfund law, 42 U.S.C. Part 9604(a)(1), and 40 C.F.R. Part 300.415 of the National Oil and Hazardous Substances Pollution Contingency Plan.

threat. Federal officials decided the best and quickest way to remove the health risk to residents of 13 houses and a daycare/pre-school was installing the water line. Additional long-term cleanup actions could be taken later.

### **Hazardous VOCs**

A family of petroleum-based hazardous chemicals called volatile organic compounds, or VOCs, contaminated the neighborhood's underground water. Environmental scientists call a supply of underground water "groundwater." The main VOC of concern goes by the long name of trichloroethylene, or TCE, but other VOCs are also present in the groundwater underneath the neighborhood. Investigators strongly suspect the VOCs came from an automotive repair shop in the vicinity, which probably used chemicals as a metal degreaser historically.

VOCs can cause cancer at high concentrations and long periods of exposure. Other health effects include dizziness, confusion, nausea, difficulty in breathing, speaking and walking, impaired heart function as well as nerve, kidney and liver damage. Young children and pregnant women are especially at risk from exposure.

Currently, the 13 houses and the Madison Early Childhood Learning Center located in the former Jesse-Beer Elementary School will be hooked up to the Madison Water District at no charge to the property owners. At these locations, contamination was found at concentrations close to or above safe drinking levels. EPA is providing supplied bottled water to properties where contamination levels exceed the safe drinking water levels until they are hooked up to public water.

Residents of the affected neighborhood are not considered cancer risks because they have not been exposed long enough to pollution or at high enough levels, but health experts warn occupants of the 13 houses and school not to take long steamy showers so they do not breathe TCE fumes.

### **Water sampling continues**

U.S. EPA responders have told other residents in the neighborhood the federal Agency cannot pay for their hookup because their water wells do not contain dangerous VOC levels. However, the water main will be present throughout the neighborhood because of this project, and residents can pay for a hookup or be connected quickly in the event conditions change.

U.S. EPA and state and local agencies have sampled the wells at 61 houses over the course of its two-year investigation. Investigators will conduct a precautionary well-sampling program every three

months over the next year at 46 houses to make sure the drinking water remains safe. The TCE soaked into the groundwater and formed a "plume" that runs underneath the neighborhood. A plume is a mass of contaminated groundwater that can move.

### **Vapor intrusion issue**

The VOC plume can cause another potential pollution problem called "vapor intrusion." Vapor intrusion occurs when the VOCs in groundwater give off gases or fumes that rise up through the soil. The gases can seep into houses and buildings through holes or cracks in the foundation or slab and cause hazardous indoor air pollution. To date, investigators have sampled the soil underneath six houses looking for trapped vapors, but they have not found TCE in the indoor air of any of the houses tested.

The U.S. EPA project manager recently sampled nine additional homes as a precaution. Results from this sampling are due back soon. If investigators discover a vapor intrusion problem, they can install a simple venting device on the structure that will lower indoor pollutants to safe levels.

### **Action plan**

Taxpayer funds will pay the \$2.7 million cost of this emergency removal action. U.S. EPA will seek reimbursement from any party judged liable for the pollution. Ohio EPA, Ohio Department of Health and the Richland County Health Department have been investigating pollution in the neighborhood for a number of years, but in 2013 they requested federal involvement when the VOC issue outstripped local resources.

U.S. EPA will take other actions along with the water line work including implementing a site-specific health, safety and security plan, installing air monitors around the work area, and creating a site emergency strategy to protect residents and workers. Once workers connect the water lines, officials will properly shut down and seal the private wells of the 13 houses and school.

Officials estimate the actual work will take 90 days to complete once it starts.