

# EPA Begins Sampling Homes for Unsafe Fumes

Ann Arbor, Michigan

November 2016

## For more information

To learn more about the EPA's indoor air testing in Ann Arbor contact:

*For technical questions:*

### **Jon Gulch**

On-Scene Coordinator  
734-692-7686  
gulch.jon@epa.gov

*For general questions:*

### **Ruth Muhtsun**

Community Involvement  
Coordinator  
312-886-6595  
muhtsun.ruth@epa.gov

## **EPA Chicago Office address:**

U.S. EPA Region 5  
77 W. Jackson Blvd.  
Chicago, IL 60604

*For health related questions,  
contact:*

## **Washtenaw County Public Health Department**

705 N. Zeeb  
Ann Arbor, MI 48107  
734-222-3800

## **Michigan Department of Human and Health Services**

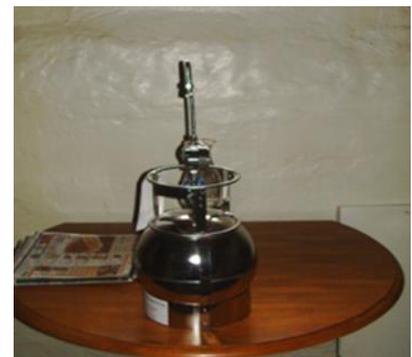
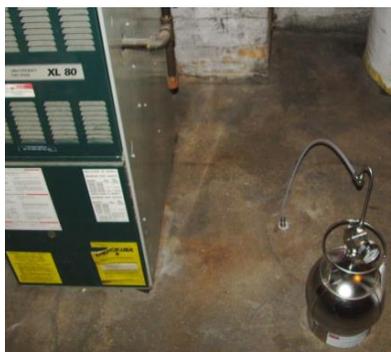
333 S. Grand Ave  
Lansing, MI 48909  
1-800-648-6942

U.S. Environmental Protection Agency is beginning a vapor intrusion study in the residential area near Armen Dry Cleaners to ensure that fumes from volatile organic compounds, or VOC's, are not seeping into homes at unsafe levels. Although VOC's can be found in common household products, exposure to high levels of VOC's can affect your health. Short-term exposure to high levels of VOC's can cause headaches and dizziness; eye, nose and throat discomfort; irritation to your respiratory tract; and also allergic skin reactions. Long-term exposure can cause damage to your liver, kidneys, and nervous system; and may also cause cancer. The VOC of concern at the Armen Cleaners site is a chemical called tetrachloroethylene, or PCE, which is commonly used in the dry cleaning industry.

Beginning this month, EPA will work with owners and residents to schedule appointments for air sampling. The sampling process will take place over a three-day period. EPA crews will start by removing household VOC's from the sampling areas in the basement, first floor, and front or back porches at your property. The products EPA will remove from the sample areas include paints, wood preservatives, cleansers, disinfectants, aerosol sprays, air fresheners, hobby supplies, gasoline, and other automotive products. Removing these products from your home will give EPA a more accurate understanding of the nature and extent of contamination caused by the dry cleaners.

EPA will return on day two to drill a small hole in the basement floor and seal vapor pins in place with cement. Then, EPA will install a device called a SUMMA canister to the sealed vapor pin to collect sub-slab air samples. Drilling will not occur on the first floor or on your front and back porch. Instead, EPA will place a SUMMA canister on a flat surface to collect air samples overnight. The following day, EPA will remove the canisters and fill or cap the drilled hole of the basement floor. The canisters will be sent to an EPA laboratory to be analyzed.

*SUMMA canister installed in basement.*



*Canister placed on table to collect indoor air sample.*

Once the results are finalized, an EPA representative will contact you to meet and discuss the sampling results and discuss the next steps necessary to protect your air quality and health. If EPA finds low levels of VOC's from the collected air samples, then no further action will be needed. However, if vapors at harmful levels are discovered, EPA will install a mitigation system that will draw harmful vapors from below your home and disperse them out into the outdoor air. The vapors are significantly diluted when released to the outside air and degraded by sunlight. After a mitigation system is installed, EPA will resample your indoor air to ensure the system is working properly.



*Vapor mitigation system installed on the outside of a house.*

EPA will also share your air sampling results with the Washtenaw County Public Health Department and the Michigan Department of Health and Human Services. These local health agencies may determine that certain levels of VOC's will require additional precautionary measures to protect your health. One possibility may be a temporary relocation of residents until indoor air levels are safe. The Washtenaw County Public Health Department will work with residents individually to coordinate any needed relocations.

### **Site History**

The Armen Cleaners site is located near downtown Ann Arbor in a primarily residential area. Armen Cleaners is an active commercial dry cleaners located in the neighborhood and has been in operation since the 1940s. In 1985, improper waste handling was discovered after neighbors complained about strong odors coming from the facility. This investigation also led to the discovery of PCE contaminated soil and groundwater. The owner/operator initially conducted a soil excavation and groundwater investigation, but those efforts were never completed.

In 2000, the Michigan Department of Environmental Quality conducted a soil and groundwater investigation to define the extent of contamination. During this investigation, it was discovered that the levels of contamination were higher than expected. As a result, the study was expanded to determine if the indoor air of nearby residential properties was being impacted. One nearby home was found to have high levels of contamination. In 2002, MDEQ placed air purifying units containing carbon filters where the highest indoor air concentrations of PCE had been detected. The carbon filters are replaced every 5 years by the MDEQ, with the most recent replacement occurring in August/September 2016.

From 2003 – 2004, EPA assisted the Michigan Department of Community Health and MDEQ in an investigation of indoor air in the neighborhood surrounding Armen Cleaners to determine whether additional homes were impacted by contaminated groundwater flowing below. During this investigation, PCE was detected in ambient outdoor air at various locations in the residential neighborhood surrounding the Armen Cleaners site. In addition, PCE was measured in air using EPA's Trace Atmospheric Gas Analyzer coming from roof vents on the Armen Cleaners building. These roof vents are at approximately the same level as the second floor apartments and back porches of the adjacent properties.

MDEQ continued monitoring the air quality of nearby residences but did not see a decrease in PCE levels. In 2016, MDEQ conducted groundwater sampling in preparation for completing an indoor air study at the residences near Armen Cleaners. Based on the results of the groundwater sampling, which indicated that high concentrations of PCE were still present, MDEQ and the Michigan Department of Health and Human Services sought assistance from the EPA.