



EPA Checking for Possible Vapor Problems

East Troy Contaminated Aquifer Site

Troy, Ohio

October 2011

Community meeting

EPA will hold a public meeting to talk about the vapor intrusion investigation at the East Troy Contaminated Aquifer site at 7 p.m., Wednesday, Oct. 19, 2011, at Van Cleve 6th Grade School, 617 E. Main St., Troy.

EPA representatives will discuss results from a 2010 sampling project performed in the target neighborhood. In that investigation the ground water (underground water supplies), surface water and sediment (mud) were checked for hazardous chemical pollution. Agency staffers will also explain how vapor samples are taken under and inside homes and buildings.

EPA needs property owners to grant permission for sub-slab and indoor air samples to be taken. This is very important in order to protect the health of residents. The sampling is very inconspicuous and the resulting information is needed to keep people safe from potential indoor air pollution. Access agreement forms to sign giving EPA permission to take samples will be available at the meeting.

If you have questions or need special accommodations at the meeting contact Don de Blasio. His contact information is listed on the back page.

This fall the U.S. Environmental Protection Agency will install 14 new monitoring wells around the East Troy Contaminated Aquifer site to collect underground water samples and will also test additional homes for a potential pollution problem called “vapor intrusion.” Vapor intrusion occurs when chemical pollutants in the underground water or soil give off dangerous gases that can rise through the earth and seep into buildings through foundation cracks and holes, causing unsafe levels of indoor air pollution. A family of chemicals called “volatile organic compounds” or VOCs are especially prone to vapor intrusion. In this case, investigators are concerned about VOCs called trichloroethylene or TCE and tetrachloroethylene or PCE, which were used as industrial solvents and dry cleaning chemicals in businesses in the area.

EPA wants to check for potential vapor intrusion issues in a 20-block area south of the Great Miami River near downtown Troy. Monitoring is done by two methods. One method called “sub-slab” testing checks the soil underneath foundations for trapped vapors. The other method simply tests indoor air for pollutants. Both types of samples are usually collected at the same time to ensure the most accurate assessment. If property owners grant permission, EPA would like to collect sub-slab vapor and indoor air samples this fall. Initially, the Agency would like to test 40 homes followed by more homes as the investigation proceeds. Depending on the results of the data collection, EPA may request permission from property owners to sample as many as 200 buildings during this investigation.

Who will be tested

Homes targeted for sampling in this latest round of monitoring are:

- Previously untested homes located above the highest known concentrations of ground water contamination.
- Homes not tested during the 2006-2008 EPA investigation that are close to other locations where EPA identified vapor intrusion concerns, including those that EPA could not get permission from property owners for sampling at that time.

As the investigation continues, EPA will test previously sampled homes that were found with high levels of PCE or TCE in the soil gas underneath the foundations but not in the indoor air. EPA will also re-test homes and one school that have existing vapor removal systems to confirm the equipment is working properly.

For the homes tested this fall, a second round of sub-slab tests in addition to indoor air samples will be collected in spring 2012. New Ohio EPA guidance on vapor intrusion monitoring requires the collection of two rounds of sub-slab tests to account for seasonal variations in soil gas concentrations.

Not all homes within the 20-block target area will be tested. If your home meets the criteria and is selected for testing, an EPA contractor will contact

Ask for an ID

All Agency personnel and contractors carry identification to assure residents they are working for EPA.

you to schedule an appointment to discuss the situation. EPA needs a signed access agreement before testing. Testing is important to protect the health of occupants from possible indoor air pollution.

Sampling equipment

EPA will use a “Summa” canister to collect sub-slab vapor and indoor air samples. For sub-slab testing, one or two small holes are made in the basement, slab or crawl space floor and a temporary sampling port (a very small diameter tube) is installed and sealed in place in each hole. The tubes are placed in a spot most likely to be an entry point for contaminated vapors. The canister is attached to the tube to collect the samples. For testing indoor air, the canister is placed on a table. Canisters are generally left in place for 24 hours or less. It is then sent to a laboratory for analysis. The results for your home will be shared only with homeowners and government agencies involved in the cleanup, not with the public. EPA will cap the sampling ports and leave them in place for a second round of testing. Two rounds of samples are needed to determine accurately if vapor intrusion is a concern.

If EPA, working with state and local health agencies, determines contaminated vapors are entering your home, an unobtrusive removal system can be installed to make your home safer. There is no charge to you for the equipment or installation if that becomes necessary.

If your home is within the shaded area on the map on Page 3, EPA may contact you to schedule an appointment. EPA will explain to the homeowner or tenant the sampling process, answer questions, identify sampling locations, review instructions and perform a general building survey to determine likely sources of household products such as paint and cleaners that can affect results. A date and time for sampling will also be scheduled during the visit.



In this example of “sub-slab” sampling, tubing is run from underneath a basement floor to a “Summa” canister to test for hazardous vapors trapped in the soil.

Underground water and soil sampling

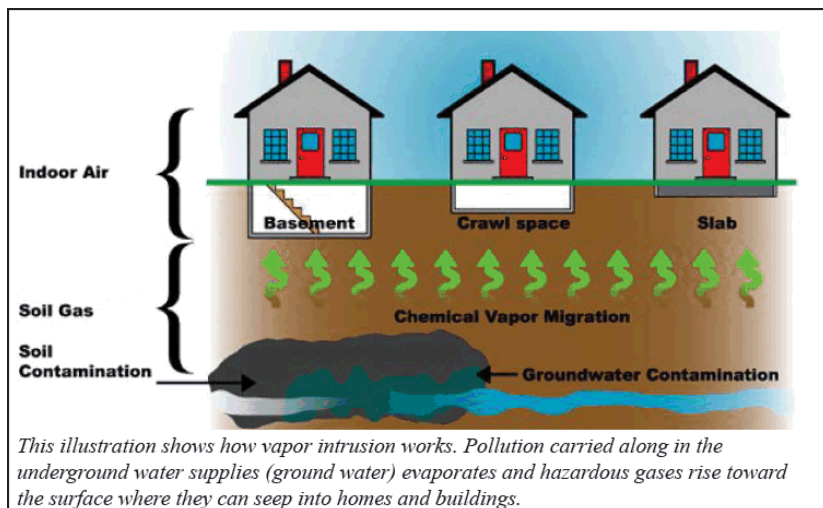
EPA will also sample underground water supplies (called “ground water” in environmental terms) and soil in two phases beginning this fall. During the first phase, 33 ground water samples will be collected from the 14 new monitoring wells mentioned above and 19 existing wells. The purpose of this sampling is to better define the extent of the ground water contamination under the site. The majority of the new monitoring wells will be installed in public right-of-ways, not on private property. EPA will obtain written permission from the city to put in the new monitoring wells. Depending on the results of the first phase of ground water sampling, additional monitoring wells may be installed and samples collected during a second phase of testing.

In the first phase of soil sampling, EPA will drill 30 soil borings, mostly in city right-of-ways. A total of 60 soil samples will be collected from these holes. The soil investigation is being conducted to locate potential source areas. Source areas are pockets of contamination that

release contaminants to the ground water over time as rainwater and snow melt move through the soil. Since it is likely multiple source areas are present at the site, and depending on first-phase results, EPA will probably add additional soil borings and collect more samples during the second phase of the investigation.

Site history

The East Troy Contaminated Aquifer site covers a 20-block portion of the city of Troy. The site is bordered to the north by the Great Miami River, to the west by Market Street, to the east by Williams Street and to the south by Race Street. Several former dry cleaners and metal cleaning businesses that once operated in the

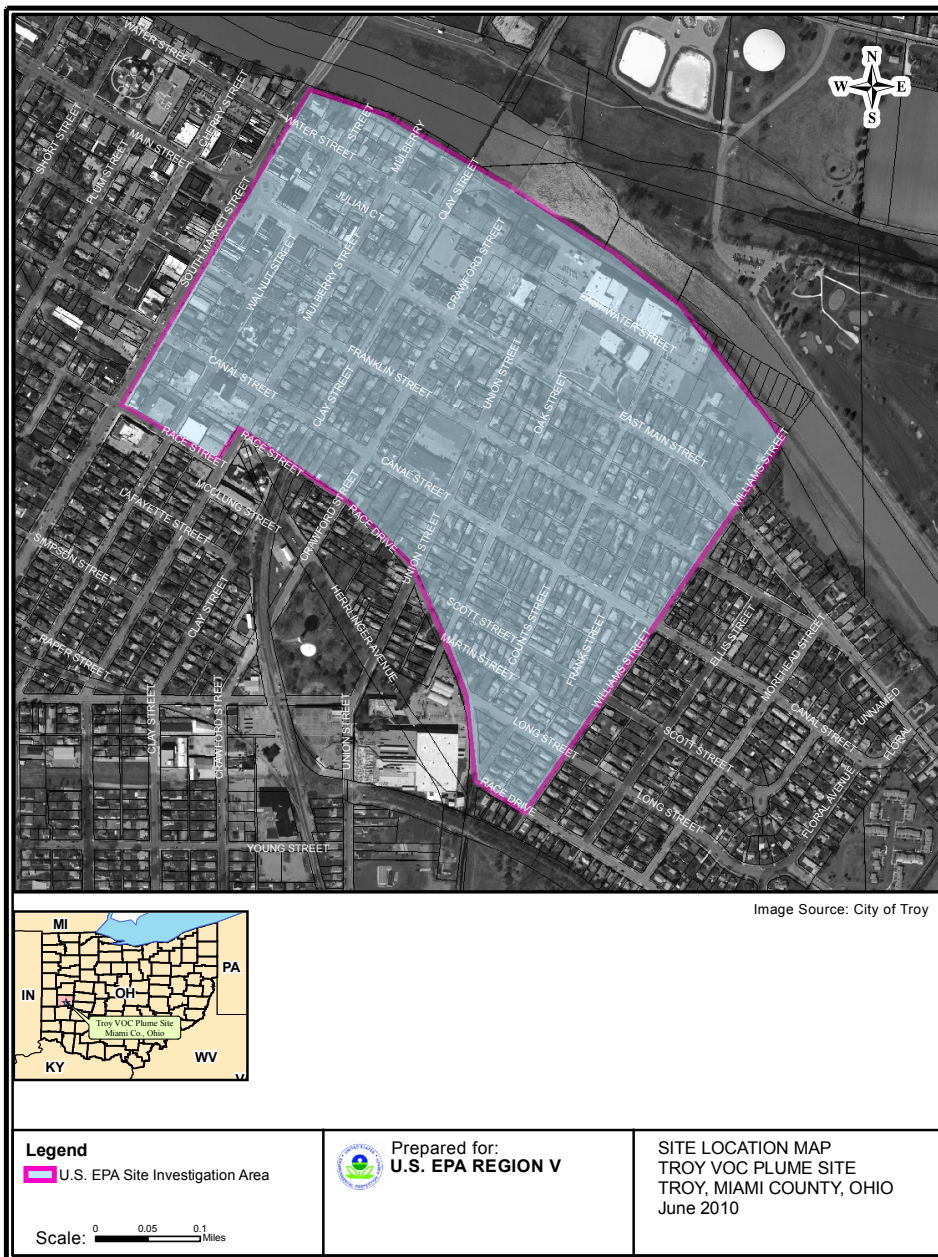


area are believed to have used PCE and TCE that were released to the environment.

In July 2010, EPA began an in-depth inquiry called a “remedial investigation/feasibility study” or RI/FS. This is part of EPA’s Superfund process to manage the nation’s hazardous waste sites. A remedial investigation is a study of the nature and extent of contamination at a cleanup site, while the feasibility study proposes and evaluates cleanup options. As part of the RI/FS, sampling was conducted last year and more samples will be collected this fall.

Over the past year, EPA collected ground water samples from 19 monitoring wells. The Agency also collected surface water and sediment (mud) samples from the Great Miami River to determine whether it was being affected by the ground water contamination. No site-related contaminants were found in the surface water or river sediment. Results of EPA’s testing and additional testing by other parties indicates the ground water “plume” extends farther east than originally thought. A plume is a mass of contaminated ground water. All homes in the area are connected to the municipal water system that is routinely tested and meets EPA safe drinking water standards.

Map of Site Investigation Area



Next steps

Once the remedial investigation is done, EPA can prepare the feasibility study, which proposes and compares cleanup alternatives. The cleanup alternatives will be evaluated against criteria including effectiveness, overall protection and cost. EPA will then propose a cleanup plan for the site and explain its justification for picking a certain option. You and your neighbors will have an opportunity to learn about the proposed plan and tell EPA what you think about it. After public comments have been considered, EPA may revise

its recommendation based on those comments before publishing a final cleanup plan known as a “record of decision.” You will have an opportunity to comment on the final plan before work begins.

EPA will let you know if test results show any contamination under your house or in the air inside your house. If unsafe levels of air pollution are found in your home, EPA will prepare a plan for clearing up the problem and consult with you about it.

For more information

To learn more about the East Troy Contaminated Aquifer site, contact one of these team members:

Don de Blasio

Community Involvement Coordinator
Superfund Division (SI-7J)
EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590
312-886-4360
deblasio.don@epa.gov

Shari Kolak

Remedial Project Manager
Superfund Division (SR-6J)
EPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604-3590
312-886-6151
kolak.shari@epa.gov


You may call Region 5 toll-free at 800-621-8431, 9:30 a.m. to 5:30 p.m. weekdays.

Information repository

You may review site documents at:
Troy-Miami Public Library
419 W. Main St.
Troy

Documents can also be found online at:

<http://www.epa.gov/region5/cleanup/troyvoc>

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United States
Environmental Protection
Agency
Region 5
Superfund Division (SI-7J)
77 W. Jackson Blvd.
Chicago, IL 60604-3590

