



Groundwater Cleanup Pilot Study Uses Innovative Method

Former Amphenol Facility
Franklin, Indiana

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For more information

For questions, comments or more information on the Amphenol investigation, contact these EPA team members:

For general information

Ruth Muhtsun

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

Rafael P. Gonzalez

Community Involvement
Coordinator
312-886-0269
gonzalez.rafaelp@epa.gov

For technical information

Carolyn Bury

Project Manager
Remediation Branch
EPA Region 5
77 W. Jackson Blvd. (LU-16J)
Chicago, IL 60604-3590
312-886-3020
bury.carolyn@epa.gov

EPA toll-free at 800-621-8431,
weekdays, 9:30 a.m. to 5:30 p.m.

You may see site-related documents at EPA's Regional office, 7th Floor Records Center, Metcalfe Federal Building, 77 W. Jackson Blvd., Chicago.

or visit

<https://www.epa.gov/in/amphenol-franklin-power-products-franklin-ind#documents>

Late this October, Amphenol Corp. completed the first phase of a pilot study to see whether contaminated groundwater near the former facility can be cleaned up by injecting a commercial liquid product into the ground, which was developed for the specific conditions at the site. The product, called "PlumeStop™," is a mixture of activated carbon and iron and was injected into the ground at two places in the neighborhood south of the site (*see figure, next page*).

A pilot study is a small test, like an experiment, planned to evaluate whether a cleanup approach could be successful. If this test is successful, then EPA will require a plan to expand the treatment to contaminated groundwater in other areas. "Groundwater" is an environmental term for underground supplies of fresh water or water moving or held between soil and rock particles underground.

The groundwater is contaminated with chemicals (called volatile organic compounds) that can turn into vapors, rise through the soil and enter buildings through cracks and holes. Carbon mixtures have been used successfully to treat groundwater with this type of contamination at EPA sites around the country. A fact sheet about activated carbon treatment of groundwater plumes can be found at <https://www.epa.gov/sites/production/files/2018-04/documents/100001159.pdf>.

How the mixture works

In the ground, the carbon mixture will first stick to soil particles and then trap chemicals from the groundwater on the carbon and soil particles. Then, the reactive iron in the mixture will break apart the chemicals to form safe compounds that do not turn into vapor.

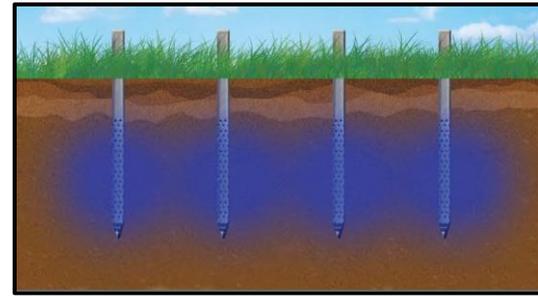
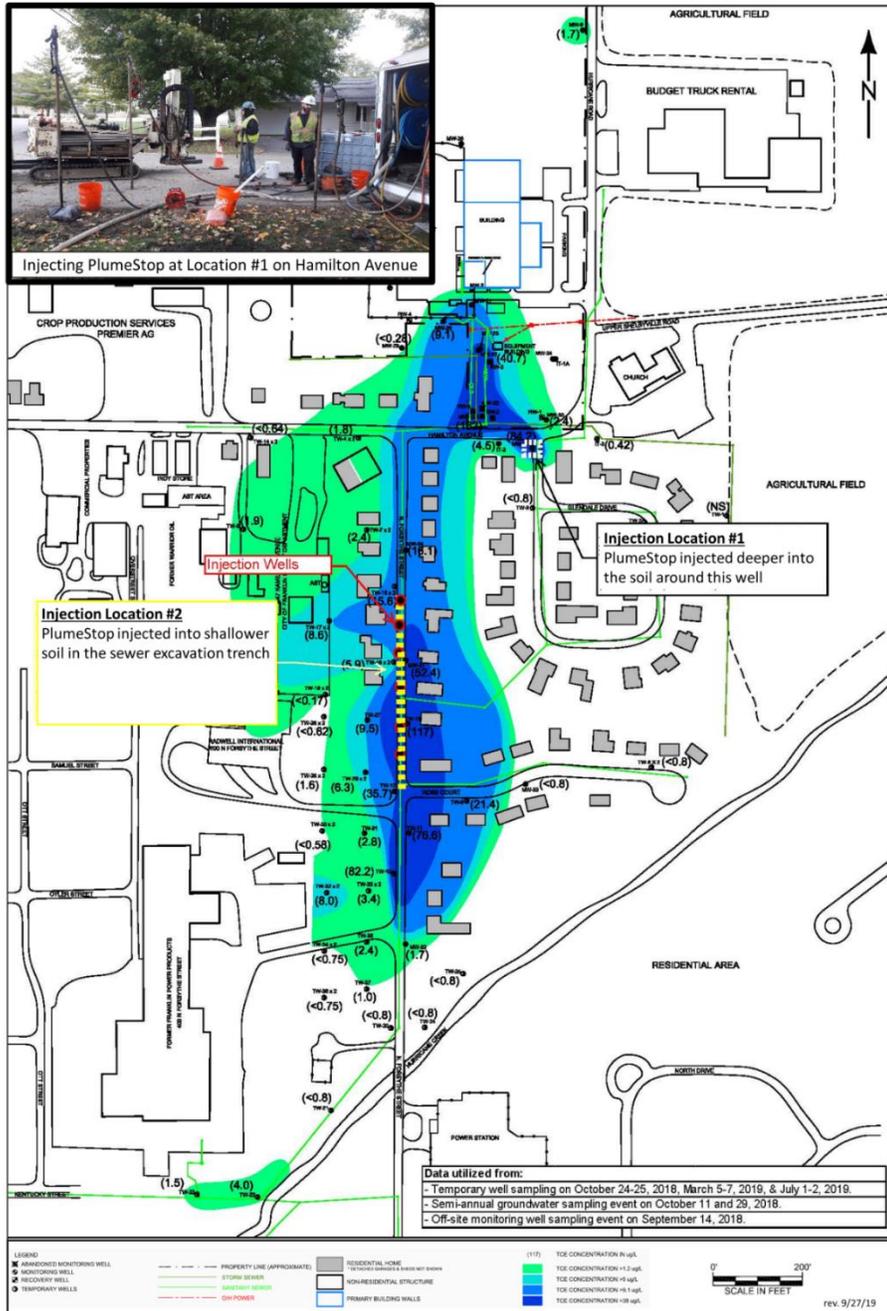
This process will repeat and continue to clean the groundwater. If the study is successful, groundwater treatment will be designed to reach the target cleanup level, which is based on both drinking water standards and levels that will not cause vapor intrusion into homes.

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FORMER AMPHENOL RFI/CMS, 980 HURRICANE ROAD, FRANKLIN, INDIANA



Injecting PlumeStop at Location #1 on Hamilton Avenue



For the study, a groundwater treatment mixture of carbon and iron was pumped into the ground under low pressure. The carbon sticks to the soil particles and traps chemicals. The highly reactive iron breaks down the chemicals into safe components.

Figure showing where groundwater treatment mixture was injected into the ground on Hamilton Avenue and North Forsythe Street. The first groundwater sampling event will be in November and then monthly until enough data is collected to assess the study.