
Vapor Extraction System Expanded Into Northern Area

American Chemical Service Site
Griffith, Indiana

October 2003

Description of the SVE

A key component of the American Chemical Service site is the system set up to vent volatile organic compounds from the ground under the site. It's called a "soil vapor extraction" system, or SVE. Here's how it works.

The system consists of a network of wells drilled into the ground in the containment area. These wells allow removal of volatile organic compounds from the soil and debris above the water table.

A vacuum draws the vapors out of the ground. They are routed to a machine that burns the vapors at 1,750 degrees Fahrenheit. This process converts the hazardous substances to water vapor and carbon dioxide, which are released into the atmosphere. Another waste product is mineral acid, which is neutralized with a base.

This process destroys more than 99 percent of the vapors.

Indiana Department of Environmental Management expects the process to destroy no less than 3 pounds of vapors per hour. The system is currently destroying approximately 11 pounds per hour.

A system designed to remove hazardous underground gases at the American Chemical Service site has been expanded and now covers the entire site. It's called a "soil vapor extraction" system, and it consists of a network of wells placed into the ground to remove volatile organic compounds, called VOCs, which are hazardous chemicals that evaporate easily on contact with air.

The system was first installed in the southern part of the site by the group of companies EPA has determined to be responsible for the pollution. That part of the system has been removing VOCs for about eight months and continues to function routinely.

More recently, the system has been expanded to the northern portion of the site. This new section is gradually coming up to speed.

Also, a soil covering was installed around the former ACS plant to help prevent rain water from washing through the contaminants into the supplies of fresh water (called ground water) below. The cover also helps the vapor extraction system work more efficiently.

Lightning causes shutdown

This summer, the water treatment plant was struck by lightning, blowing out all the electronics in the building. The pumps were shut down so workers could replace or repair the electrical components. That work took a couple of weeks.

Having the pumps turned off for that long caused another problem. Part of the water treatment process involves tiny organisms that eat organic solvents in the ground water that is pumped out. Without a regular source of food, some of these "bugs" died and had to be replaced. The good news is that during the shutdown, no untreated ground water was discharged from the treatment plant.

What's Coming

The current work at the ACS site is called "final cleanup," and it's expected to be completed in mid-2005. Once this phase of the cleanup is finished, there will be routine maintenance and operation activities as the cleanup process continues.

For more information

If you have questions or concerns about the American Chemical Service site, please contact one of the EPA team members listed below.

Janet Pope

Community Involvement Coordinator

EPA Region 5

(312) 353-0628 or

(800) 621-8431, ext. 30628

pope.janet@epa.gov

Kevin Adler

Project Manager

EPA Region 5

(312) 886-7078 or

(800) 621-8431, ext. 67078

adler.kevin@epa.gov

(Toll-free lines are open weekdays 10 a.m. to 5:30 p.m., Eastern Time)

Prabhakar Kasarabada

State Project Manager

Indiana Department of Environmental Management

(317) 234-0352

pkasarab@dem.state.in.us



Region 5
Office of Public Affairs (P-19J)
77 West Jackson Boulevard
Chicago, Illinois 60604

ACS Site: Vapor Extraction System Expanded