



U.S. DEPARTMENT OF **ENERGY**

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Southwest Plume Cleanup to Start By Summer 2013 At DOE's Paducah Site

PADUCAH, KY – The U.S. Department of Energy, U.S. Environmental Protection Agency, and Kentucky Department for Environmental Protection have reached another milestone toward the objective of reducing groundwater contamination at DOE's Paducah Site.

The three agencies in March approved a Record of Decision (ROD) for the Southwest Plume Sources. LATA Environmental Services of Kentucky, DOE's cleanup contractor at Paducah, will start field work by summer 2013 to clean up sources contributing to a plume of contaminated groundwater in the southwestern portion of the Paducah Site, as specified by the ROD. The areas of contamination do not extend beyond the plant boundaries and pose no threat to residents in the area.

A ROD is a publicly available document that explains which remedies were formally selected to clean up a contaminated area. The ROD is available on the LATA Kentucky website at www.latakentucky.com.

"The approval of this ROD is significant because it addresses three sources of groundwater contamination at the Paducah Site," said Reinhard Knerr, DOE Paducah Site Lead. "We're very proud of this accomplishment and appreciate the cooperative effort with the regulatory agencies."

DOE signed the Southwest Plume ROD on March 16, followed by EPA on March 20, and a letter of concurrence from Kentucky regulators on March 23. The last ROD was signed in 2005.

The new ROD relates to sources of trichloroethene (TCE), a hazardous substance in the ground at the Paducah Site's 2.2-acre former oil landfarm area and two locations near the C-720 Maintenance and Stores Building. Those source areas have resulted in contamination of the shallow gravel aquifer underlying the site and are located within the secured area.

The remedy for the landfarm area is deep soil mixing, which blends material such as reactive iron particles with the soil to chemically break down organic contaminants into nontoxic end products.

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Starting no later than June 2013, large diameter augers will inject reactive iron into the ground and mix it with soil to a depth of about 50 feet.

Waste oils containing TCE were biodegraded at the landfarm from 1973 to 1979, using lime and fertilizer. TCE, a common industrial degreaser, was used at the site from the early 1950s until 1993.

Additional testing this summer will determine whether bioremediation or long-term monitoring will be implemented for the other two sites, northeast and southeast of the Maintenance and Stores Building. Both have TCE contamination in the upper 50 feet of soil.

Spills from routine equipment cleaning and rinsing are the suspected source of the contamination northeast of the maintenance building. TCE may have been discharged from inside the building through storm drains to the southeastern site, which houses instrument maintenance facilities and maintenance supply storage. Other sources may have been spills or leaks on the loading dock or parking lot southeast of the building.

If bioremediation is the remedy, implementation will start in 2014. Bioremediation uses microorganisms or their enzymes to aid in the degradation or breakdown of contaminants into nontoxic end products.

The Southwest Plume, one of three major contaminated groundwater plumes at the Paducah Site, is generally confined to the southwestern part of the site's fenced area.

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Deep soil mixing at the Paducah Site will involve a large-diameter auger like this one.



The oil landfarm, above, was used from 1973-1979 to biodegrade waste oils by mixing them with lime and fertilizer. The area, below, is now grassy.

