



U.S. DEPARTMENT OF **ENERGY**

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DOE starts treatment system to remove groundwater contaminant

PADUCAH, KY – The U.S. Department of Energy today marked the operational start of the treatment system to remediate the largest source of groundwater contamination at the Department's Paducah Site.

“Cleaning up the environment and protecting people from exposure is the core value of the environmental cleanup program,” said Bill Murphie, manager of DOE's Portsmouth/Paducah Project Office, at a ceremony at the C-400 Cleaning Building. “The commencement of this project marks a major turning point in achieving groundwater cleanup at the site.

“The discovery of off-site groundwater contamination, most of it emanating from this building, was the catalyst for our environmental management project in Paducah. Removal of this source of groundwater contamination is critical to our success,” Murphie said.

During more than 40 years of maintenance operation activities of the enrichment process, tens of thousands of gallons of the degreaser trichloroethene (TCE) spilled or leaked into the ground around the building. Heavier than water, TCE migrates downward. The TCE migrated up to 100 ft below the surface, where the groundwater aquifer mixes with and transports the TCE, leading to the formation of three plumes of contaminated groundwater at the site.

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DOE uses an electrical resistance heating system that heats the groundwater below the surface beyond the boiling point of TCE (189 degrees Fahrenheit). As the temperature rises, the TCE and the water vaporize. The TCE-containing vapors are captured using vacuum pumps and routed through a cooling treatment system that removes contaminants for safe disposal. The clean treated water is discharged to the environment or reused in the treatment process.

The treatment system will operate as long as the system is effectively removing TCE from the groundwater. The decision to shut down the system will be jointly agreed upon by DOE, the Kentucky Department for Environmental Protection, and the U.S. Environmental Protection Agency.

The system is being constructed in two phases. The first phase is operational; construction on phase two begins in summer 2010, with phase two operation scheduled to start in late 2010.

“I want to thank our contractors, Paducah Remediation Services, and its subcontractors, including Shaw Environmental, Murtco Mechanical Contractors, Chase Environmental, McMillan-McGee, Boart-Longyear, and Seminole Systems, and the more than 110 employees who have made this achievement possible,” Murphie said. “They built a treatment system right next to a building that is essential to ongoing plant operations. They figured out how to accomplish our mission without interfering with USEC’s [United States Enrichment Corporation’s] mission. That is no small accomplishment.”

Today’s ceremony was attended by representatives of Kentucky’s Congressional delegation, the U.S. Environmental Protection Agency, the Kentucky Department for

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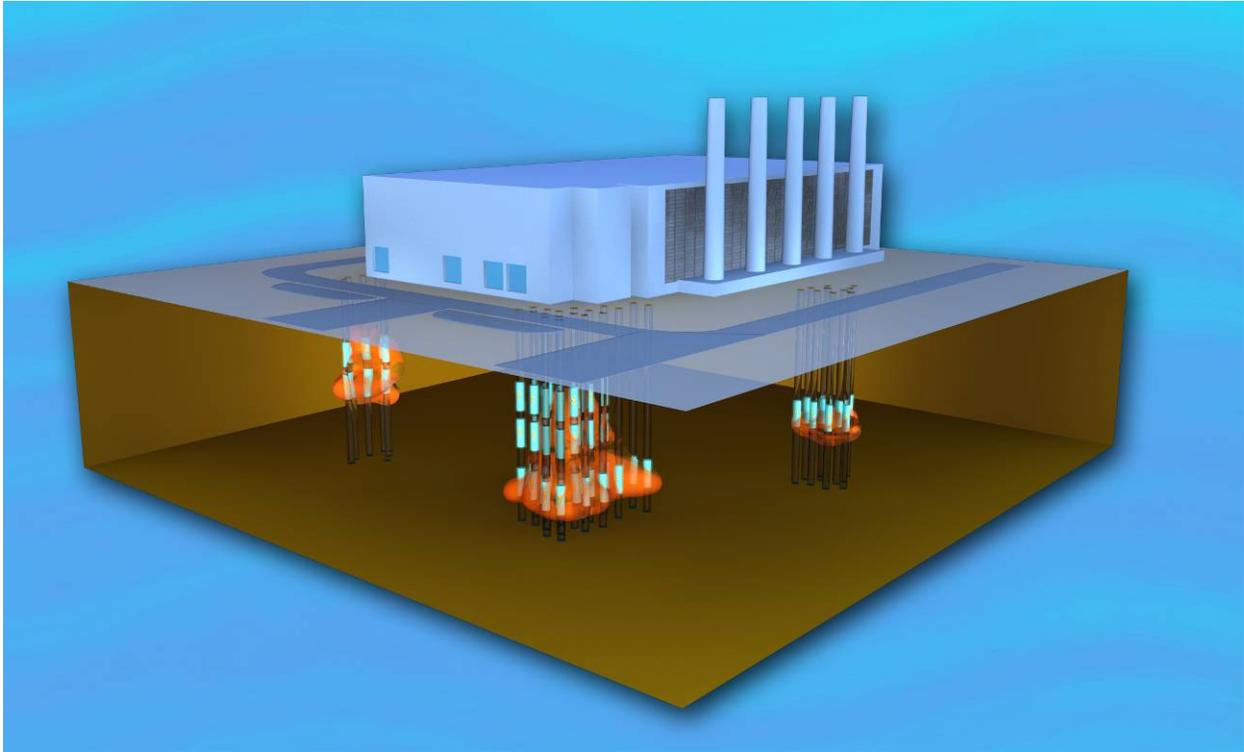
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Environmental Protection, local elected officials, and other community leaders. In the next year the pace of work continues to speed up as DOE plans to remove as much contaminated material as it has in the past three years combined.

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Subsurface electrodes heat the groundwater to extract the degreaser TCE from up to 100 feet deep; (bottom), workers install one of the electrodes that are heating the subsurface to remove TCE.