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Oversight News

Newsletter of the Commonwealth's Environmental Oversight of the Paducah Gaseous Diffusion Plant (PGDP)

*Kentucky Department for Environmental Protection
Division of Waste Management
Hazardous Waste Branch
Paducah Gaseous Diffusion Plant Section*

Deep Soil Mixing Project Begins at SWMU 1

Field work for the deep soil mixing project is underway at Solid Waste Management Unit (SWMU) 1, also known as the C-747-C Oil Landfarm. The purpose of the project is to remove organic solvents from the soil down to a depth of approximately 60 feet. The remedial action will use a large crawler crane and drilling platform to turn an 8-foot diameter auger to a depth of 60 feet, while injecting steam and hot air. Off gas from the drilling project will be captured by a 12-foot diameter containment shroud over the boring that is under vacuum. Off gas is treated to remove volatile organics using carbon filtration systems, before being discharged to the environment. After steam injection is completed, an iron slurry mixture is injected throughout the boring to treat any residual volatile organic solvents. The iron mixture will continue to react with any remaining residual contamination for months into the future. The entire treatment area at covers 262 eight foot diame-



ter borings. Mixing and injecting operations are scheduled to continue into the summer months.

Photos provided by LATA Environmental Services of Kentucky, LLC.



C-400 Steam Injection Treatability Study

The Phase IIb steam injection treatability study at C-400 commenced on April 8. The study includes one steam injection location screened at middle and deep depths of the Regional Gravel Aquifer (RGA), together with a temperature monitoring array to monitor the steam front progression at fixed locations spatially. The objective of the study is to determine if steam injection will adequately remediate the volatile organic compound (VOC) source material in the deeper portions of the RGA at C-400. Previous attempts to remediate VOCs with electrical resistance heating worked well at depths to 60 ft. bgs; however between 60 ft. and 110 ft. that technology was unable to achieve the desired temperatures. The Steam Injection Treatability Study is designed to observe the movement and distribution of steam in the deeper (60 to 110 ft. bgs) portions of the subsurface and to provide data to refine the estimates of permeability, anisotropy/heterogeneity and local groundwater velocity. The information gathered during the study will be used to model steam injection and multiphase extraction (such as well spacing, locations, and steam injection rates) to assess the technical implementability and cost effectiveness of steam injection at a larger scale. The field data collection portion of the treatability study is expected to take about 4 months to com-



plete. If steam (heat) can be successfully transmitted and temperatures sustained far enough away from the injection well, then computer models will be utilized to design a full-scale version with multiple steam injection points.



C400 treatability study photos courtesy of LATA Environmental Services of Kentucky, LLC.

New PPO Website Inaugurated

DOE's Portsmouth Paducah Project Office (PPO) has inaugurated a new web-site. Check it out at: <http://www.energy.gov/pppo/portsmouthpaducah-project-office>

Changing of the Guard

In March, Julie Corkran became the EPA Remedial Project Manager (RPM) for the Paducah project. Julie has worked as an RPM in the U.S. EPA Region IV Federal Facilities Branch clean-up program since 1998, supporting DOE, NASA, Army, Navy and Air Force Superfund projects. Jennifer Tufts will remain active on other federal projects in Region IV.

In April, Todd Mullins, PGDP Section Supervisor and FFA Manager for Kentucky Division of Waste Management, accepted a new position in the Underground Storage Tank Branch. Best wishes and good luck to all in their new endeavors!



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The mission of the Kentucky Division of Waste Management is to protect human health and the environment by minimizing adverse impacts on all citizens of the Commonwealth through the development of fair, equitable, and effective waste management programs.



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