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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*

C-410/420 Demolition Complete



C410/420 building before demolition.

With the completion of demolition of the C410/420 facility, the Department of Energy (DOE) has completed the Decontamination and Decommissioning (D&D) of 32 inactive facilities that comprise the D&D Operable Unit at the Paducah Site. The C-340 Metals Complex and the C-410/420

Complex were the largest and most complicated facilities to undergo D&D at the Paducah Site to date. The overall reduction in footprint associated with completing the 32 D&D facilities totals an area of 323,600ft²; or roughly the equivalent of three city square blocks.

In October 2014, the DOE regained control of the Paducah Site from the United States Enrichment Corporation and approximately 500 additional facilities were returned to the DOE. These additional facilities once supported uranium enrichment operations, but now will undergo deactivation, assessment, and decontamination, with the majority of the facilities likely to undergo demolition. The DOE estimates that 3.1 million cubic yards of D&D generated material will be generated from the remaining 500+ facilities.

C410/420 slab after demolition.



Water Level Study at 2 Potential OSWDF Sites

To address EPA's concerns about the depth to the water table at two of the proposed On-Site Waste Disposal Facility (OSWDF) locations, the DOE contractors installed a series of 10 piezometers at site 5A. One concurrent set of water level readings was taken from the site 5A piezometers.

Three transects of three piezometers were installed across a water feature that bisects site 11. Transducers were placed in the piezometers on site 11 to monitor the water level as compared to the intermittent stream they crossed. A stream gauge was also installed in the deepest transect. Water levels were recorded for a month at site 11. The data will be evaluated to determine if the groundwater at site 11 is hydraulically connected to the intermittent stream that crosses site 11.

The data should help the EPA understand whether a Toxic Substance Control Act waiver for depth to groundwater would be required to put an OSWDF on either of these sites. DOE, EPA and Kentucky agreed that no additional data was needed at sites 1, 3A or 9 for a waiver determination.

CAB Input Sought

At the July Citizens Advisory Board (CAB) meeting DOE solicited community input regarding how DOE should sequence and prioritize clean-up projects at the Paducah Site. DOE plans to share the CAB's recommendations with EPA and KY regulators during September planning meetings, in an effort to balance stakeholder priorities. This will affect how future clean-up work at the Paducah Site will be prioritized and sequenced.



Piezometer at site 11.



Piezometer at site 5A.

Phase 4 of SWMU 4 Investigation Completed

Phase 4 of the SWMU 4 field investigation finished July 10th. SWMU 4 is a burial ground located on the west side of the plant. This phase investigated the Regional Gravel Aquifer (RGA) for volatile organic compounds (VOCs) and Tc-99 contamination in water and soil. Soil samples were taken at the top of the RGA where it interfaces with the Upper Continental Recharge System and at the bottom of the RGA at the interface with the McNairy formation. Water samples were taken at intervals from 60' to 115' below ground surface.

Each phase of this project has been collaborative, with the DOE, the EPA and Kentucky meeting and agreeing on the location of the next phase of borings. The Phase 4 deep borings were located to further define the high concentration portion of the trichloroethylene plume at SWMU 4. This will help aid the design of corrective action for the Southwest plume contamination source at SWMU 4.

Two field activities remain for the SWMU 4 investigation. Phase 5 will install 5 permanent monitoring wells in and around

SWMU 4, based on the data from the Phase 4 sampling. Test pits will be dug in six locations yet to be determined by the Federal Facilities Agreement parties. These pits will be located within five burial areas located by geophysical electromagnetic imaging from a previous investigation.

Monitoring well installation and test pit excavation should be completed this coming winter.

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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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Kentucky Environmental Oversight News is published quarterly by the Kentucky Department for Environmental Protection's Division of Waste Management. It features information regarding environmental cleanup activities at the Paducah Gaseous Diffusion Plant site and related topics. Additional information is available from:

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