

Autumn 2014



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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*

Site Preparation Work Completed at Solid Waste Management Unit (SWMU) 1

Site preparation work for the deep soil mixing project at SWMU1 began in mid-July and finished in mid-September. The area to be treated was excavated 4 feet to enable the auger to reach to the top of the Regional Gravel Aquifer (RGA). A gravel access-way was gently sloped from the street to the treatment area because the large mixing equipment cannot travel safely over a surface with much slope. A sediment basin was installed between the treatment area and the spoils pile of excavated dirt. The excavation was hydro-seeded and robust sediment controls were installed. The soil mixing portion of the project will begin this coming winter.



LATA Workers prepare the SWMU 1 Site.



C410/420 Demolition Continues

The C410/420 D&D project continues to show very visible progress. The C410 portion of the building was completely demolished at the end of August. Size reduction and disposal of debris from the building continues. Removal of transite (asbestos) panels on the side of the C-420 building commenced the first week of September. This is in preparation for demolition of the rest of the structure, hopefully by the end of 2014.



Aug. 22, 2014



Aug. 22, 2014



Aug. 22, 2014



Sept. 19, 2014



Sept. 19, 2014



Sept. 19, 2014

C-400 Update Phase 2A

Temperatures have stabilized throughout the subsurface and the amount of contaminant recovered has leveled off, signaling that the system has reached peak effectiveness. The system began operating in a "pulsed mode" July 27. This means that only one or two headers are operated at a time. Pulsing started with the headers with the most TCE, but each header was pulsed during this phase of the operation. Pulsing ended on Sept. 9 and the system is currently in maintenance mode with the electrodes on and the treatment systems operational. In the near future a decision will be made to discontinue heating and to shut the system down.

During the project, the system operated for 406 days. Approximately 1117 gallons of volatile organic compounds (VOCs) were captured by the carbon system. Mass VOC removal averaged 7 gallons a week from June 1st to mid-July, down from a high of 125 gallons for the week of Jan. 20. Mass removal decreased even more to an average of 4 gallons per week from mid-July through early September. This signals that asymptotic conditions (a horizontal straight line on a graph) have been reached and that treatment should cease.

The temperature in the treatment zone achieved target temperature, on average

in mid-March. Target temperature at each depth was reached in mid-June. Average temperatures exceeded goals at all elevations. Temperatures within the treatment zone were sufficient to allow mass removal to reach asymptotic conditions.

Combined header vapor concentrations have decreased from a first week average (after restart in January) of 14,385 ppmv to ~15 ppmv. Individual vapor wells with the highest concentrations have had concentrations decrease to a small percentage of their maximum value.

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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.



Printed on recycled paper with federal

Kentucky Department for Environmental Protection

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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Acknowledgment: This material is based upon work supported by the Department of Energy under Award Number DE-EM0001946.

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