

Summer 2016



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Oversight News

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

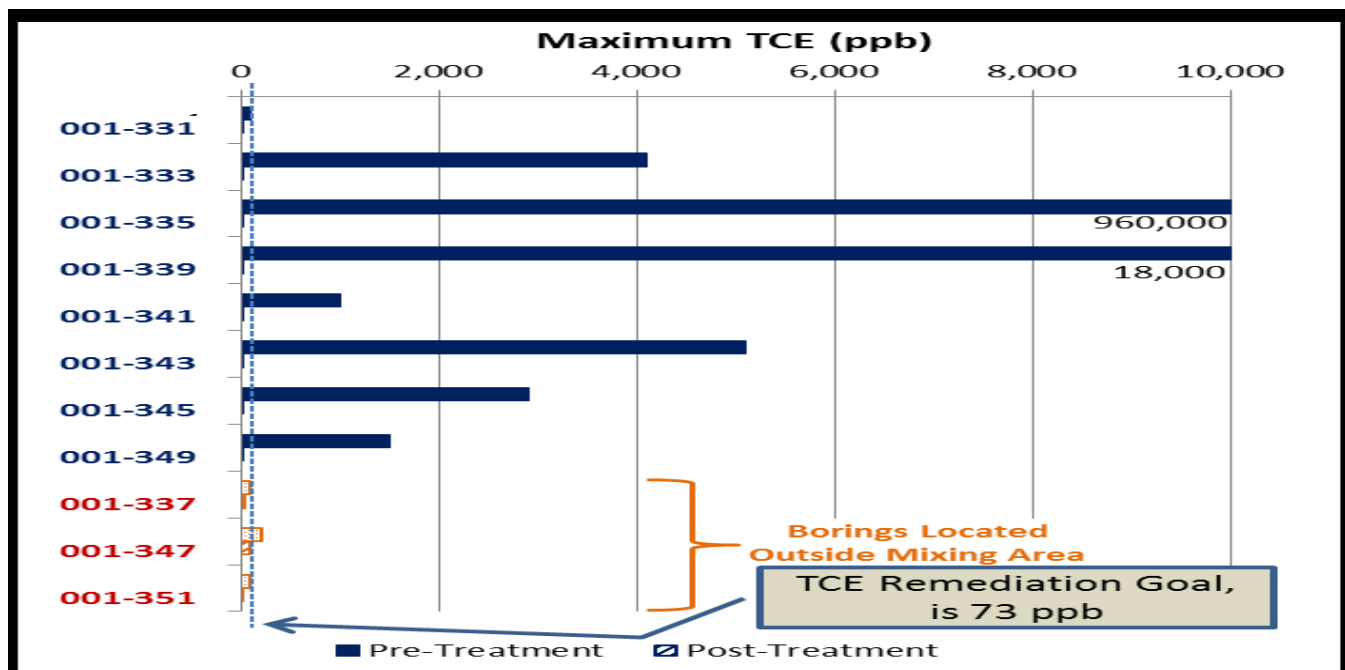
Kentucky Department for Environmental Protection
Division of Waste Management
Hazardous Waste Branch
Paducah Gaseous Diffusion Plant Section

Deep Soil Mixing Project at SWMU 1 Proves Highly Successful

Eleven post remedial soil borings were drilled to sixty-five feet in order to measure the success of the treatment of the one-acre area by deep soil mixing at Solid Waste Management Unit (SWMU) 1 this spring. The post remedial borings were placed near the same locations as the Remedial Design Support Investigation borings to allow comparison of contaminant levels before and after mixing. Each soil boring was screened with a Photo Ionization Detector (PID) every five feet and the highest reading determined where to collect the soil sample. Eight of the 11 soil borings were located inside of the treated area and showed a ~99 percent overall reduction of trichloroethene (TCE). In the chart below, pre-treatment concentrations of TCE are represented by the longer lines and post-treatment results are barely visible, below the TCE remediation goal of 73 parts per billion (ppb). The highest post-treatment TCE detected within the treatment area was 8.6 ppb. Seven other volatile organic compounds (VOCs) were all detected below their remediation goals. "The successful remediation of VOC's at SWMU 1 is a testament to the aggressive technology deployed and the hard work and dedication of all those involved," said Brian Begley, PGDP Section Supervisor.



Photo and chart courtesy of DOE.



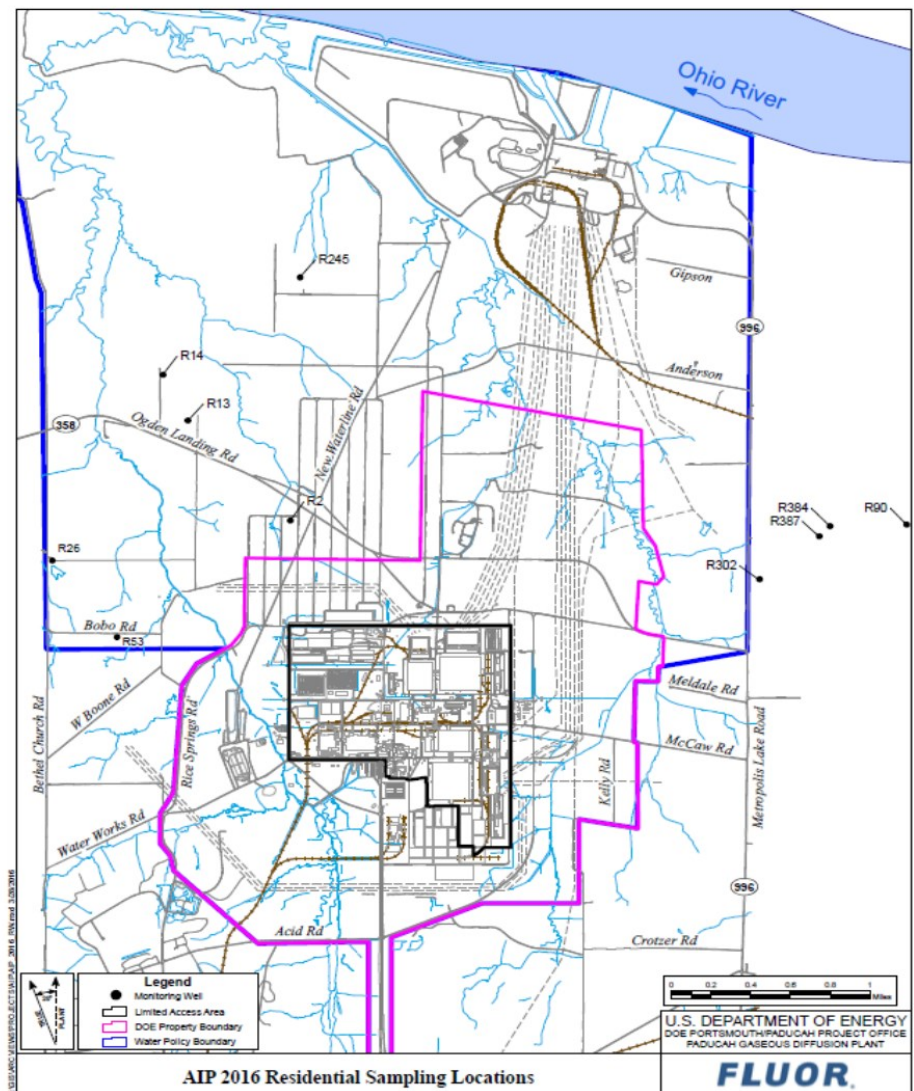
AIP Groundwater Investigations

During 2015, Agreement In Principle (AIP) staff collected samples from five different residential wells and 91 different monitoring wells. In all, AIP staff sampled some wells more than once for a total of 124 sampling events during 2015. All five residential wells were sampled twice; the first sampling event AIP collected samples independent of DOE and the second time AIP split samples with DOE contractors in November. The 2015 AIP Groundwater Sampling Locations map show all wells sampled during the 2015 reporting period. Nearly all the wells sampled are located less than two miles from a known groundwater plume or within two miles of the Paducah Gaseous Diffusion Plant.

The residential wells sampled by AIP staff were all located outside of the known groundwater plume boundaries (not shown on adjacent figure). During the 2015 reporting period, AIP independently confirmed that all five of the residential wells sampled were not being impacted by the plumes. Residential well owners can trust that their wells are sampled independent of DOE, that samples are analyzed by an independent lab, and all results are independently reviewed and interpreted by AIP staff. For all residential wells sampled, the laboratory report and a discussion of the results were sent directly to each resident.

In 1988, when TCE and Tc-99 were discovered at off-site water wells, nearby residents using groundwater wells for domestic use were provided an alternative water supply. In response, DOE created a Water Policy Box that provides alternative water sources to residents, at no cost, who live in proximity to contaminated groundwater. In exchange, residents must agree to refrain from using the groundwater, which is used, in part, to protect

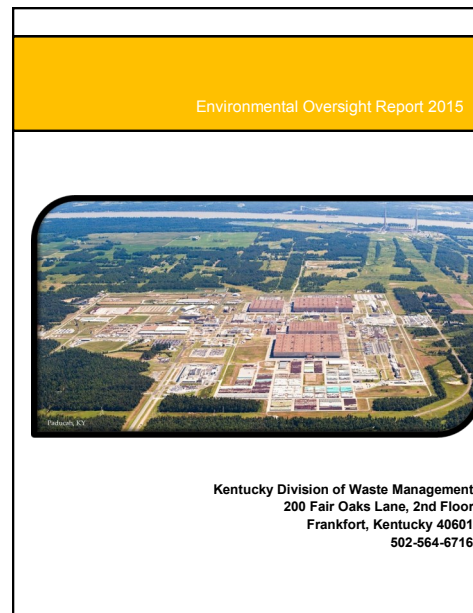
the public from potential exposure to contaminants. In 2015 AIP staff focused on sampling residential wells in proximity to the groundwater plumes to monitor for any evidence that the plume was expanding outwards. Based upon the 2015 sampling results, the groundwater plumes do not appear to be migrating towards any of the residential wells located within the Water Policy Box. During 2016 AIP continue to focus on wells within and adjacent to the Water Policy Box.



2015 DWM PGDP Annual Report Issued

The 2015 Annual Report for the Division of Waste Management Paducah Gaseous Diffusion Plant Section was issued April 21, 2016. The annual report details sampling and analysis of data performed by the Agreement in Principle (AIP) staff. It also records the activities of the Federal Facilities Agreement (FFA) staff. It may be accessed at:

<http://waste.ky.gov/HWB/Pages/PaducahGaseousDiffusionPlant.aspx>



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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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