

# OUR SITE. OUR FUTURE.

# DECOMMISSIONING WORK

Cleanup of the Department of Energy (DOE) Gaseous Diffusion Plant located in Pike County, Ohio involves many actions, but some of the major work includes:

- Potentially demolishing 400+ Gaseous Diffusion Plant Facilities
- Assessing existing site landfills and conducting additional actions, if necessary
- Cleaning up contaminated soil
- Cleaning groundwater affected by Degreasing Solvent (TCE)
- Leaving the site in an attractive form to future users

The Gaseous Diffusion Plant is currently the largest DOE facility under roof. The three process buildings (X-326,



X-330, and X-333) cover about 96 acres of land. Since each building is two stories tall, they represent about 200 football fields of floor space under roof. If selected as a final cleanup decision, dismantlement of these buildings would require removing hazardous materials like lubricating oils and mercury switches; dismantling and removing radiologically contaminated process equipment; removing asbestos in the buildings; disconnecting heat, light and water; removing the asbestos exterior siding; and finally demolishing the structure. Support facilities at the site that

are no longer needed may also be removed. Site utilities, such as steam, power, and water must be altered and optimized to support other site tenants (American Centrifuge and the DUF6 Projects) and possible future users.

The main hazards that must be addressed when cleaning up the site include:

- Degreasing Solvent (TCE – trichloroethene)
- Heavy Metals - Nickel, Arsenic, Chromium
- PCBs (polychlorinated biphenyls from electrical transformer oils)
- Radioactive Elements - Uranium and Technetium-99
- Asbestos in building materials





# OUR SITE. OUR FUTURE.

## DECOMMISSIONING WORK

Five areas (plumes) of groundwater affected by degreasing solvent (TCE) are currently being managed pump and treat, oxidant injection and a slurry wall. Ohio EPA limits the amount of TCE in drinking water to 0.005 mg/L (5 grams of TCE in 1 million liters of water is considered safe to drink). While the solvent in these plumes exceed this limit, it has not impacted the public water supply. This figure shows the location of groundwater plumes. These plumes must continue to be treated to return groundwater to clean standards.

There are currently sixteen closed landfills on the site in five different areas. These cover about 94 acres (about 85 football fields) of the site property. It is currently estimated that the landfills contain about 1 million cubic yards of soil and waste. This would fill a train stretching from Piketon to Cincinnati. These landfills must be evaluated to determine if additional action is necessary to support future use of the site.

If all the buildings are dismantled, current estimates predict about 2.1 million additional cubic yards of waste would be generated from building rubble, removal of the equipment, and cleanup of soil. These estimates do not include the existing landfills or plume excavations, roadways, fences, storage pads, legacy waste, or building personal property.



U.S. Department of Energy  
Portsmouth Gaseous Diffusion Plant  
Public Meeting, Sept. 13, 2011  
Waverly High School, Waverly, Ohio

