

# HONORING OUR HERITAGE

## Environmental Cleanup 1989-Today

TIMELINE

1940

1950

1960

1970

1980

1990

2000

2010



During the Cold War era at Department of Energy (DOE) sites across the country, nuclear-related operations resulted in soil and groundwater contamination as well as the production and temporary storage of radioactive waste. The Portsmouth plant was no different. In the 1980s, the U.S. Environmental Protection Agency (EPA) became responsible for environmental regulatory oversight for DOE under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Resource Conservation and Recovery Act (RCRA). To comply with environmental regulations, DOE formed the Office of Environmental Management whose mission is to complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.

- 1989** The DOE signs consent agreements with the State of Ohio and EPA to conduct environmental cleanup at the Portsmouth site.
- 1991** An 1,100-ft. trench system and groundwater treatment facility is built to prevent migration of contaminated groundwater into Little Beaver Creek.
- 1992** The 11.5-acre X-749 Contaminated Materials landfill is closed and capped on the south end of the plant.
- 1994** An 1,077-ft. subsurface clay mortar barrier wall is installed as an interim action at the southern boundary to stop contaminated groundwater migration.
- 1997** An 18-acre lime sludge lagoon is converted to a prairie.
- 2000** Project begins to size-reduce, containerize and remove 8,400 tons of contaminated scrap metal.
- 2004** Ground is broken for a new depleted uranium hexafluoride (DUF<sub>6</sub>) conversion plant to convert more than 22,000 cylinders of DUF<sub>6</sub> to a more stable form.
- 2005** Cleanup is complete on a 7-acre scrap metal storage yard, disposing of more than 8,000 tons of radioactively contaminated scrap metal.
- 2007** More than 49,000 containers are shipped off-site from the original Gas Centrifuge Enrichment Plant (GCEP) facilities so it can be reused for the American Centrifuge Plant.
- 2008** More than 430 pieces of process equipment converter shells, weighing 20 tons each, are removed from the site.
- 2009** Construction of the DUF<sub>6</sub> plant is complete.
- 2011** DUF<sub>6</sub> plant becomes operational.



**1989** DOE and EPA working together to oversee cleanup of the site



**1991** Trench system built to protect Little Beaver Creek



**1992** X-749 Contaminated materials landfill closed and capped



**1994** Subsurface barrier installed



**2007** GCEP container shipments



**1997** Eighteen-acre lime sludge (before & after)



**2000-2005** Cleanup project at storage yard (before & after)

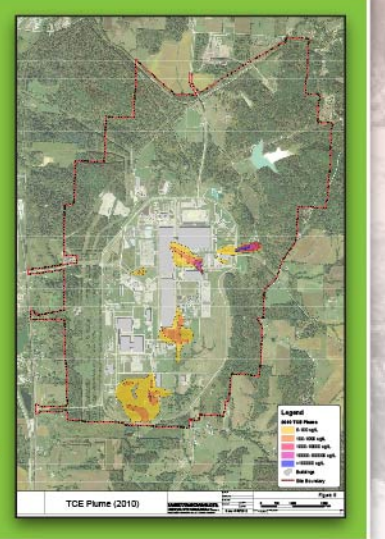


Depleted Uranium Hexafluoride Conversion Plant

### Environmental Concerns

- Contaminated Groundwater
- Radioactively Contaminated Waste
- Depleted Uranium Hexafluoride

The main groundwater contaminant is Trichloroethylene, a degreaser commonly used to clean process equipment.



**2008** Converter shell project

