Deteriorating Facilities to be Demolished

The 1960’s era Portsmouth Gaseous Diffusion Plant (GDP) played a vital role in winning the Cold War and now must be demolished. As part of DOE’s cleanup plan, highly contaminated waste will be shipped off site for disposal while lower level contaminated demolition debris, waste and soils will be consolidated onsite at a newly constructed On Site Waste Disposal Facility (OSWDF). Though the original GDP will be demolished, many of the roads, rail lines and utility systems will be preserved to support community initiatives for reindustrialization and reuse.

Two Records of Decision (RODs) detail DOE’s plan for demolition of the old gaseous diffusion buildings and the off-site and on-site plan for disposal of the generated waste. The approach outlined in the RODs was developed in coordination with the Ohio EPA.

1.4 million cubic yards of radiologically and chemically contaminated demolition debris and rubble will be safely placed in a newly constructed engineered On Site Waste Disposal Facility (OSWDF) located in a remote section of the PORTS site.

99.7% of all radioactivity currently onsite will be shipped off-site for disposal.

Existing landfills and groundwater plumes within the current industrialized area of the site will be dug up and consolidated into the OSWDF to provide fill for debris disposal thereby opening up the former process area for community reuse/reindustrialization.
A Balanced Approach to Waste Disposal

99.7% of all Radioactivity will be shipped off-site for disposal

The remaining amount (0.3%) will be distributed among the 1.4 million cubic yards of contaminated soil and debris placed in the OSWDF.

Radioactive inventory shipped off-site (99.7%)
- Depleted uranium hexafluoride (DUF6) cylinders
- Packaged radioactive waste
- Equipment used to process highly enriched uranium
- Heavily contaminated nickel from equipment used to process low enrichment uranium

Radioactive inventory disposed on-site (0.3%)
- Contaminated building debris
- Materials exhumed from landfills & groundwater plume areas
- Size reduced processing equipment
- Contaminated soil

Consolidating demolished buildings, landfills and plumes into OSWDF

The OSWDF is designed to perform for at least 1,000-years and to blend into the regional landscape. Below is a graphic rendering of what it will look like once all waste has been placed and covered with a multi-layered cap consisting of natural and man-made materials and prairie grass.

The OSWDF is a modern designed disposal facility with a multilayer lining and capping system at the location with the best available on-site geology. It is fully protective of human health and the environment and is compliant with federal and state environmental regulations.