

# PORTSMOUTH/PADUCAH PROJECT OFFICE (PPPO)

“Marked by 20 years of collaborative spirit, the PPPO workforce tackles some of the toughest environmental issues with innovative approaches to cleanup providing our communities with opportunities for a vibrant, sustainable future of economic development and long-term revitalization.”

- Joel Bradburne, Manager, Portsmouth/Paducah Project Office

## HIGHLIGHTS

- **Removed an additional 1 million pounds of hazardous R-114 refrigerant from the Paducah Site—an EM 2023 priority.**
- Completed waste placement of 163,000 cubic yards from the Portsmouth X-326 Process Building demolition in the On-Site Waste Disposal Facility.
- Completed the first phase of construction of the Portsmouth On-Site Waste Disposal Facility project.
- Completed demolition on 16 excess facilities at Paducah.
- Completed the Paducah C-209 Protective Forces facility and the C-105 Emergency Operations Center.
- Began the first offsite shipping of depleted uranium oxide from both the Portsmouth and Paducah depleted uranium hexafluoride, or DUF6, conversion plants via multi-car rail shipments for disposal at a licensed facility.

## PORTSMOUTH DEACTIVATION AND DEMOLITION PROJECTS ADVANCE

Significant progress was made this year to deactivate and demolish the three massive process buildings at the Portsmouth Site. Project personnel closed out the X-326 Process Building demolition project with

final disposition of more than 135,000 cubic yards of generated debris in the On-Site Waste Disposal Facility (OSWDF).

At the X-333 Process Building, 88% of deactivation activities have been completed that will prepare building for pre-demolition in 2024.



*During deactivation workers remove thousands of components from the X-333 building in preparation for future demolition.*

## PORTSMOUTH ON-SITE WASTE DISPOSAL FACILITY REACHES A MAJOR MILESTONE

At the OSWDF, a covering was placed on the first three waste cells holding debris generated from the X-326 Process Building. This initial OSWDF project was completed 22 months ahead of schedule and \$30 million under budget, earning the project the DOE Project Management Excellence Award. Construction activities on the next phase of the project began and include three additional cells of the OSWDF in preparation for future X-333 Process Building demolition debris.

## PADUCAH PROCESS BUILDING DEACTIVATION ADVANCES

The Paducah Site is advancing the C-333 Process Building deactivation that will lead to the site's future transformation. A first-of-its-kind technology was deployed with the Large Item Neutron Assay System (LINAS) to scan and measure the neutron particles emitted from uranium deposits inside large equipment removed from the process building. Measurements will determine how the equipment will be disposed.



Process gas equipment is scanned in LINAS chamber as technicians finalize methods for measuring deposits from past operations.

## HAZARDOUS MATERIAL REMOVAL CLEARS PATH FOR CLEANUP

Another key element in deactivation and demolition is the removal of site hazards, such as the 8 million pounds of R-114, a hazardous, ozone-depleting refrigerant. The halfway point in this campaign was reached with disposition of 1 million pounds of R-114, meeting an EM 2023 priority.



Paducah Site maintenance mechanics remove the last 1-ton chlorine cylinder from the C-611 Water Treatment Plant, a significant reduction of hazards at the site.

## DUF6 CONVERSION PLANT SHIPPING PROGRAM

At DUF6 PPPO plants in Portsmouth, Ohio and Paducah, Kentucky, 638 DUF6 cylinders were processed this year, bringing the total cylinders processed to date to 7,200 with 59,800 cylinder remaining. The project also made significant progress in establishing a new oxide shipping program using a multi-car train to transport an initial 300 cylinders to a disposal facility in Texas and paving the way for construction of the new shipping facilities at each site.



The inaugural multi-car oxide shipment safely leaves the Portsmouth Site for the disposal facility in Texas.