



# Portsmouth Environmental Bulletin

June 2006

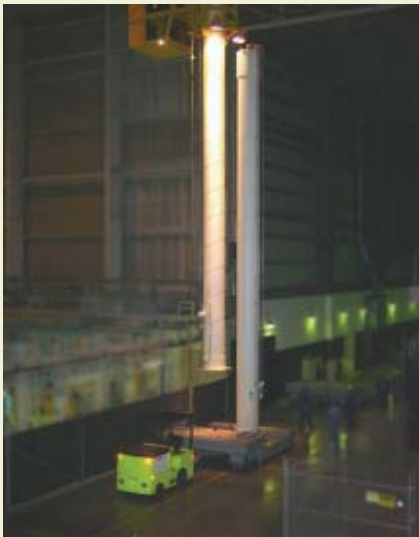
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## First Nine Inactive Facilities Demolished at Piketon Plant

The U.S. Department of Energy (DOE), through its remediation contractor LATA/Parallax Portsmouth, LLC, has recently completed the removal of nine inactive facilities scheduled for demolition this year at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. A total of 14 inactive facilities are scheduled for removal at the Piketon plant by early 2007.

The nine demolished facilities were the X-230J-1 Environmental Monitoring Station, the X-230J-8 Environmental Storage Building, the X-740 Waste Oil Storage Facility, the X-106B Old Fire Training Building, the X-616 Liquid Effluent Control Facility, the X-615 Old Sewage Treatment Plant, the X-344C Hydrogen Fluoride Storage Building, the X-344E Gas Ventilation Stack and the X-344F Safety Building. Demolition was performed by LATA/Parallax Portsmouth, LLC and its subcontractor, CDM, on these facilities from February to May 2006.



*The X-616 Effluent Control Facility Demolition*

All nine demolished facilities have been inactive for a number of years and were no longer needed at the site. The removal of these facilities will mean a reduction in long-term surveillance and maintenance costs for the DOE.

Facility	Constructed	Demolished
X-230J-1 .....	1968 .....	February 22, 2006
X-230J-8 .....	1981 .....	February 23, 2006
X-740 .....	1982 .....	February 28, 2006
X-106B .....	1967 .....	March 16, 2006
X-616 .....	1976 .....	April 2006
X-615 .....	1954 .....	May 2006
X-344C, E & F .....	1958 .....	May 2006

*\*Additional photos inside on pages 4 and 5*



## Uranium Disposition Services Erects Depleted Uranium Conversion Building

Construction is well underway by Uranium Disposition Services, LLC (UDS) for the new conversion plant at the Portsmouth Gaseous Diffusion Plant. The facility will convert depleted uranium hexafluoride ( $DUF_6$ ) remaining from former uranium enrichment operations to uranium oxide for reuse or disposal.

UDS was contracted by the U.S. Department of Energy in August 2002 to design, construct and operate two facilities, one at the Portsmouth site and the other at the Paducah, Kentucky plant.

Since breaking ground in July 2004, UDS has completed site excavation, installation of underground utilities, and major construction of the conversion plant, warehouse and administration building, according to John McCoy, Portsmouth UDS plant manager.

Conversion operations are to begin in early 2008 after a testing and startup phase. During construction, the site will employ up to 200 construction personnel and the plant is expected to employ approximately 150 workers during operations. The facility is projected to operate for 18 years to process the almost 250,000 metric tons of  $DUF_6$  in inventory at the site.

Additional photos and information are available at:  
<http://www.uds-llc.com>.



Site Excavation



Conversion Building Foundation



Utilities Installation and Foundation Work



Initial Conversion Building Construction



Conversion Building, Late March 2006



Work Progresses On Conversion Plant

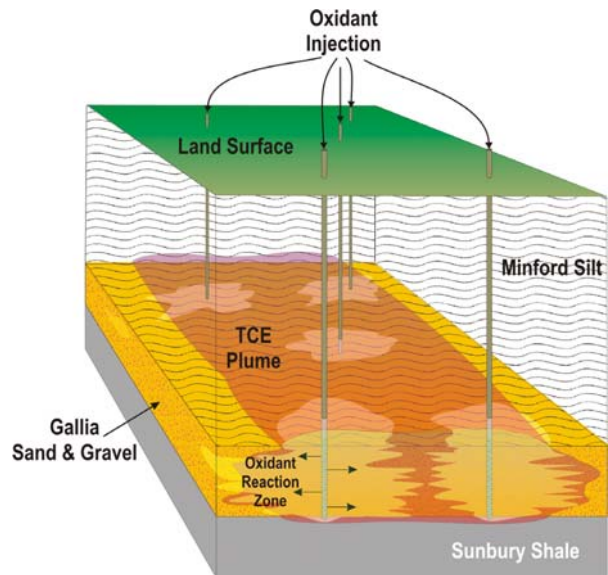
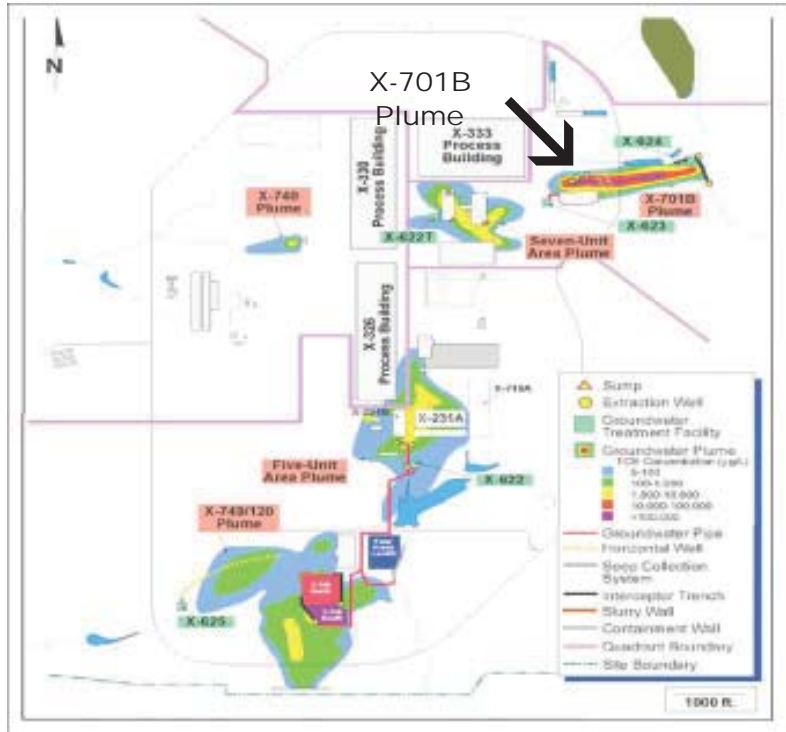
# Oxidant Treatment Shows Promise To Clean Up Groundwater

Results from the Phase I oxidant treatment of the X-701B groundwater plume via mobile injection equipment is showing promise. A work plan has recently been submitted to the Ohio Environmental Protection Agency for approval to continue full implementation of the treatment for the remainder of the groundwater remedy.

The X-701B groundwater plume is located on the east side of the plant and contains the highest concentrations of trichloroethene, or TCE, an industrial solvent previously used at the plant to degrease equipment. A Decision Document was issued by Ohio EPA in December 2003 to use chemical oxidation for treatment of the groundwater.

Phase I was completed by CDM, a teaming partner with LATA/Parallax Portsmouth, LLC, in November 2005. Overall, there was a 23% reduction in the average TCE concentration in groundwater during Phase I. In the middle Gallia soils of the plume area, there was a 99% reduction in the average TCE concentration.

Based on the positive results of Phase I, DOE has recommended implementation of the developed remediation system for the full-scale treatment of the X-701B groundwater plume, over approximately a three-to-four-year treatment operation.



Mobile equipment is used to inject chemical oxidant into the X-701B Groundwater Plume Area to break down contaminants (primarily the industrial solvent trichloroethene or TCE).

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# Removal of Inactive Surplus Facilities



*The X-740 Waste Oil Storage Facility was constructed in 1982 as a 6,000 square foot facility that provided a staging area for 55-gallon drums of waste solvents and oils pending final disposition.*

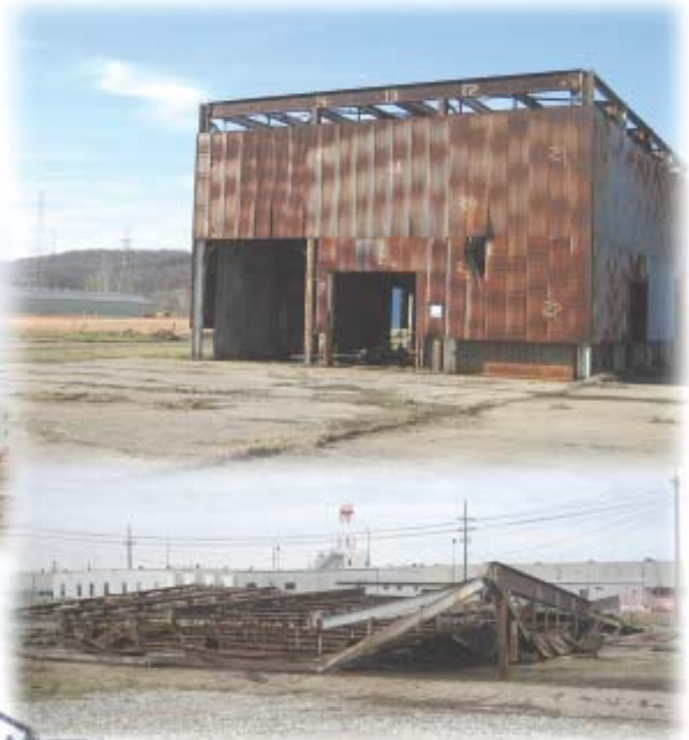
*Bottom left: The X-230J-1 was a block building formerly used as a monitoring station until 1983.*

*Bottom right: The X-230J-8 was a steel temporary structure used as a general and soil sample storage and later as an air monitoring station.*



# *LATA/Parallax Portsmouth, LLC and Subcontractor CDM Perform Demolition Activities*

*The X-106B Old Fire Training Building (right and below) was a 2,400 square foot corrugated metal structure built in 1967 and used until 1987 for fire training exercises, pumper testing and occasional storage.*



*The X-616 Liquid Effluent Control Facility (above) treated Recirculating Cooling Water blowdown from the plant's process cooling system. The facility was approximately 2,500 square feet and included five above-grade tanks, three below-grade tanks, and a small pumphouse.*



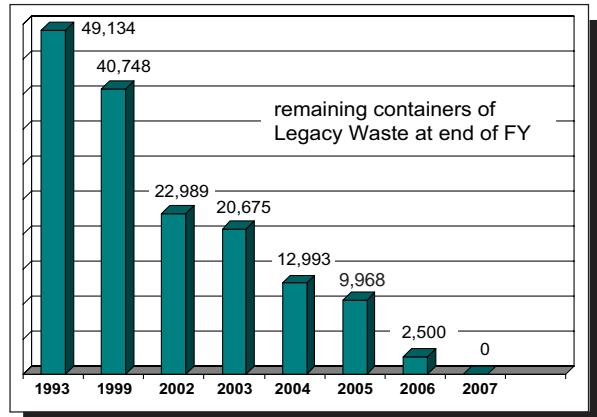
## Project Accelerated To Complete Waste Disposition in 2007

LATA/Parallax Portsmouth has accelerated a project to complete shipment of all remaining containers of DOE legacy waste off-site by the end of Fiscal Year (FY) 2007.

More than 49,000 containers of waste were in storage at the Portsmouth Gaseous Diffusion Plant in 1993. The total number was reduced to the last 10,000 remaining containers in storage at the end of FY 2005. Extensive efforts have been made over the past year to remove the majority of waste in storage, not only to reduce overall surveillance and maintenance costs but also to free up areas in the Waste Storage Facility that will be needed for the American Centrifuge Plant.

During FY 2005, a total of 3,025 containers of waste were shipped off-site, with the majority of the waste shipped either to EnergySolutions in Utah or the TSCA Incinerator

Portsmouth has shipped more than 4,471 containers of legacy waste off-site with four months left in the fiscal year. The last 2,500 containers are expected to be completed by the end of FY 2007.



### RTR Project Provides Added Safety

A mobile real time radiography (RTR) system is being used by LATA/Parallax Portsmouth to evaluate contents of mixed and low level waste containers before preparing for shipment, which provides a significant safety benefit to workers. The equipment utilizes an x-ray source to image container contents and identify any prohibited items such as liquids, aerosol cans, or pressurized materials, limiting the need for manual inspections by workers.

The RTR system evaluates approximately 25-30 containers per day depending on the size of the containers. The equipment uses a conveyor belt to move four 55-gallon drums or one "B-25" waste container box at a time through the system.

### \$9M Contract Awarded to Treat Process Waste

In February 2006, LATA/Parallax Portsmouth awarded a \$9.4 million subcontract to Perma-Fix/M&EC of Oak Ridge, Tennessee for the treatment of approximately 180 cubic meters of special process waste stored at the Portsmouth plant. The waste contains uranium and technetium as well as heavy metals that require treatment to remove the hazardous constituents prior to disposal. The contract is through September 2007.

Perma-Fix/M&EC will design, procure, install, operate, and treat the waste currently stored on-site. There are approximately 1,063 various sized containers of special process waste. All treatment of the mixed low-level radioactive waste will occur at Perma-Fix/M&EC's facility. Following treatment, LATA/Parallax Portsmouth will ship the waste to the Nevada Test Site for disposal.

## GCEP Cleanout Project Prepares Facilities For Centrifuge Plant

The Gas Centrifuge Enrichment Plant (GCEP) cleanout program continues to clear the way for the USEC Lead Cascade Project and its planned American Centrifuge Plant at the Portsmouth site.

USEC is removing old centrifuge machines and excess classified materials from the GCEP facilities, under contract to DOE. USEC is expecting to remove all equipment by August 2006. LATA/Parallax Portsmouth has responsibility for disposing of the equipment. To date, 246 truckloads have shipped 984 of the total 1,383 casings to the Nevada Test Site for disposal. Another 507 containers of additional equipment have been shipped in FY 2006. The cleanout project is approximately 62% complete and is on track for completion in March 2007.

USEC anticipates the Lead Cascade centrifuge demonstration project to be operational this summer and the commercial plant starting enrichment operations in 2009 and reaching production capacity of 3.5 million SWU (separative work units) in 2011.



### Plant Hosts Visitors

*Congresswoman Jean Schmidt (Ohio Second District), above right, and DOE's Assistant Secretary for Environmental Management James A. Rispoli, below center, recently paid separate visits to the Piketon plant site to tour facilities and meet with plant management.*



## Plant begins transition to Cold Shutdown; prepares for D&D

The Portsmouth plant has begun transition from a Cold Standby mode to a Cold Shutdown, which eliminates the requirement to keep the plant in a mode capable of restart, and prepares the facility for future Decontamination and Decommissioning (D&D).

Under the transition, USEC is removing uranium deposits that formed in the gaseous diffusion piping equipment during operations (1954-2001). By removing the deposits chemically with the cascade intact, DOE is avoiding potential future health/waste hazards during surveillance and maintenance and final plant D&D.

Besides deposit removal, USEC will also be removing PCB oils, lube oils and deactivating equipment to prepare for the plant D&D or long-term surveillance and maintenance.

The Army Corps of Engineers is developing a D&D cost estimate for DOE this summer. In fall 2006, DOE will be submitting a formalized analysis to the Deputy Secretary that will be evaluated to determine whether to begin D&D or enter long-term surveillance and maintenance of the plant.

**United States Department of Energy  
Environmental Bulletin**

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## Documents Recently Added to the Environmental Information Center

These public documents have been recently added to the Administrative Records Files and Information Repository and are available for review at the DOE Environmental Information Center, located at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio. Hours for the Information Center are 9 a.m. to noon on Monday and Tuesday, noon to 4 p.m. on Wednesday and Thursday, and closed Friday. Visits to the center must be arranged in advance by calling (740) 289-3317 or sending an e-mail to [eic@bright.net](mailto:eic@bright.net).

### Additions to the Administrative Records Files

<u>Date</u>	<u>Title</u>	<u>Document Numbers</u>
◆ 04/05	2004 Data Evaluation of Reductive Dechlorination Associated with HRC-X™ Injection at the X-749 South Barrier Wall Area	DOE/OR/11-3175&D1
◆ 12/05	Site Treatment Plan Fiscal Year 2005 Annual Report for the Mixed Wastes	DOE/PPPO/03-0007&D1
◆ 12/05	Deferred Unit Plan	DOE/OR/11-3128&D4
◆ 03/06	Phase I Report for the Groundwater Remediation of the X-701B Solid Waste Management Unit	DOE/PPPO/03-0012&D1
◆ 03/06	2005 Groundwater Monitoring Report	DOE/PPPO/03-0013&D1
◆ 04/06	Corrective Measures Plan for the X-735 Landfill	DOE/PPPO/03-0019&D1
◆ 05/06	Work Plan for the Groundwater Remediation of the X-701B Solid Waste Management Unit	DOE/PPPO/03-0020&D1

### Additions to the Information Repository

<u>Date</u>	<u>Title</u>	<u>Document Numbers</u>
◆ 06/05	2005 Annual End State Vision	DOE/OR/11-3137&D3
◆ 12/02/05	National Historical Preservation Act, Section 106 Compliance - Removal of Five Surplus Support Facilities	PPPO-03-006-06
◆ 02/08/06	5 Demolitions: X-106B, X-230J-1, X-230J-8, X-616, and X-740 Portsmouth Gaseous Diffusion Plant (PORTS), Pike County, Ohio	OHPO
◆ 03/23/06	National Historic Preservation Act Compliance, Removal of Four Surplus Support Facilities	PPPO-03-008-06
◆ 03/24/06	National Historic Preservation Act Compliance, Removal of Five Inactive Support Facilities	PPPO-03-114-06
◆ 04/17/06	5 Demolitions: X-342C, X-344C, X-344E, X-344F, and X-615 Portsmouth Gaseous Diffusion Plant (PORTS), Pike County, Ohio	OHPO

Additional information available at: [www.lpports.com](http://www.lpports.com)



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