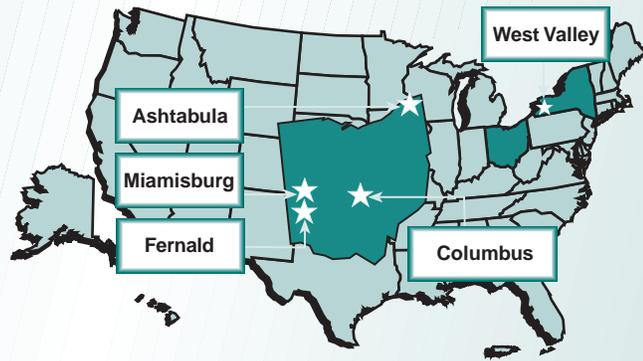


## E.8 Ohio Field Office Summary

The Ohio Field Office manages six sites in the states of Ohio and New York. These sites include: Ashtabula Environmental Management Project (RMI Extrusion Plant); Columbus Environmental Management Project (Battelle Columbus Laboratories, two sites); Fernald Environmental Management Project; Miamisburg Environmental Management Project (Mound Plant); and West Valley Demonstration Project (WVDP). Ohio's current baselines reflect completion of its environmental management cleanup mission at all sites by 2008. However, through acceleration and enhanced performance, the goal is to finish by 2005.

### Ohio Field Office

*The Ohio Field Office manages environmental management activities at six sites in the states of Ohio and New York. These sites include: Ashtabula Environmental Management Project; Columbus Environmental Management Project (2 sites); Fernald Environmental Management Project; Miamisburg Environmental Management Project;*



The **Ashtabula Environmental Management Project** encompasses the cleanup activities at the RMI Titanium Company Extrusion Plant (formerly Reactive Metals, Inc.), a privately owned facility. From 1962 to 1988, the company received uranium billets and refined them into various shapes for fuel and target fabrication use by the Department of Energy (DOE) and its predecessor agencies. RMI also performed work for the Department of Defense and a number of commercial entities under a Nuclear Regulatory Commission License. Twenty-six years of handling, extruding, forging, and machining uranium at the facility have resulted in on-site and off-site contamination of buildings and environmental media.

The **Columbus Environmental Management Project** decommissioning project consists of 15 buildings and includes two geographically distinct sites (West Jefferson and King Avenue). Between 1943 and 1986, Battelle Memorial Institute (Battelle) performed atomic energy research and development for DOE and its predecessor agencies. As part of the Government's fuel and target fabrication program, Battelle participated in nuclear research activities that included

fabrication of uranium and fuel elements; reactor development; submarine propulsion; fuel reprocessing; and safety studies of reactor vessels and piping.

The uranium metal production operation at **Fernald Environmental Management Project** was constructed in the early 1950s to convert uranium ore into uranium metal, and to fabricate the uranium metal into target elements for reactors that produced weapons-grade plutonium and tritium. Production operations continued for more than 36 years, until DOE suspended them on July 10, 1989.

In 1947, the Dayton Project of the Manhattan Engineering District became the Mound site. Cleanup activities at the Mound site are carried out under the **Miamisburg Environmental Management Project**. Mound's early mission included nuclear materials research. Later missions included process development, production engineering, manufacturing and surveillance of detonators, explosive timers, transducers, firing sets, explosive pellets, components, and specific test equipment. Additional manufacturing activities at Mound included recovering and purifying tritium.

From 1966 to 1972, Nuclear Fuel Services, Inc., operated a commercial nuclear fuel reprocessing plant at the Western New York Nuclear Services Center under contract to the State of New York. The plant, now referred to as the **West Valley Demonstration Project**, reprocessed uranium and plutonium from spent nuclear fuel, generating approximately 2.3 million liters (600,000 gallons) of liquid high-level waste that was stored in underground tanks. In 1972, nuclear fuel reprocessing operations were discontinued.

### E.8.1 End State

Each of the sites under the Ohio Field Office has a plan in place for end state and long-term stewardship. Exhibit E-44 provides a summary of the anticipated site end states for the Ohio Field Office.

#### Exhibit E-44 Summary of Ohio Field Office End States

Site Name	End State Description
Columbus Environmental Management Project - King Avenue	King Avenue will be complete in FY 1998, and all 9 buildings and grounds will return to Battelle for reuse without radiological restrictions, according to Nuclear Regulatory Commission (NRC) guidelines. All waste streams, primarily uranium and thorium, will be shipped off site for disposal. The entire Columbus Environmental Management Project will be complete by FY 2005.
Columbus Environmental Management Project - West Jefferson	This site will be complete in FY 2005. The end state will return the buildings and adjacent soil areas at this site back to Battelle in a condition for use without radiological restrictions, according to NRC guidelines. All waste streams will be shipped off site for treatment, storage, or disposal.

## Exhibit E-44 (Continued)

### Summary of Ohio Field Office End States

Site Name	End State Description
Fernald Environmental Management Project (FEMP)	FEMP will be left in an end state agreed to by the Fernald Citizens Advisory Board and the Community Reuse Organization, although it will still fall under federal ownership. Stakeholders have recommended that specific future use of the site should be determined closer to the time of reuse, but residential and agricultural activities should be avoided. The greatest potential for future use is recreational and industrial. The current FEMP baseline projects that the site will be completed by 2008. However, the Ohio Field Office and the FEMP Office are committed to accomplishing the completion scheduled for 2008 by the end of FY 2005. FEMP will construct a large on-site disposal facility to contain up to 2.5 million cubic yards of low-level wastes with radiological and/or chemical concentrations exceeding free release limits. There will be controlled access to the disposal facility. By 2008, FEMP will install infrastructure to restore the aquifer to a 20 parts per billion (ppb) uranium contamination level through extraction and treatment of groundwater.
Miamisburg Environmental Management Project (MEMP)	Soil remediation to industrial use levels (of approximately $1 \times 10^{-5}$ reduced risk) will be completed at the Mound Plant in 2003, at which time the site will be sold to the Miamisburg Mound Community Improvement Corporation (MMCIC). The Miamisburg Mound Community Improvement Corporation was formed in order to effectively represent the interests of the local community. Environmental Management will remain the landlord, though the Office of Nuclear Energy (NE) will have a continuing mission at Mound through its use of seven buildings. The landlord costs and cleanup requirements for these buildings are the responsibility of NE. Volatile organic compound-contaminated off-site groundwater will be remediated to a residential level prior to FY 2005. Excess nuclear materials will be off site in FY 1998. Currently, MEMP is planned for completion by 2005. Pending validation of the current baseline, it is the goal of the Ohio Field Office and the MEMP Office to clean up the site in 2003.
Ashtabula Environmental Management Project (AEMP)	The end state for the AEMP will be reached in 2003 when the site will be released to RMI. RMI will have sole responsibility for future land use. Future use is assumed to be industrial, consistent with surrounding property and zoning. Surficial soils contaminated with uranium will be remediated to less than 30 pCi/g. The NRC license will be terminated in 2003 when the property is released.
West Valley Demonstration Project (WVDP)	The site is owned by New York State but DOE has exclusive use and possession of the WVDP premises. By the end of FY 2005, DOE will have satisfied its responsibilities for West Valley according to the West Valley Demonstration Project Act, Stipulation of Compromise Settlement, the Cooperative Agreement, and the Record of Decision, after which DOE will not be responsible for any of the decisions involving the future use of the site. The end state for the WVDP involves completion of HLW solidification, and shipment of HLW canisters, LLW, MLLW and TRU in accordance with the WVDP Act Stipulation of Compromise and ROD. The SNF will be shipped to INEEL. Tanks and facilities will be decontaminated and decommissioned. Operational responsibility will be returned to the New York State Energy Research and Development Authority (NYSERDA). LLW disposal has yet to be determined.

**E.8.2 Cost and Completion Dates**

Ohio Field Office has divided its environmental management work into 31 discrete projects. A Project Baseline Summary (PBS) exists for each project and contains detailed programmatic information, including cost, schedule, scope, end state, and interim milestones. A summary of the Ohio cost and schedule information is illustrated in Exhibit E-45. For additional information on these projects, refer to the individual PBSs.

The estimated Office of Environmental Management (EM) life-cycle cost of Ohio Field Office site cleanups is \$4.8 billion (constant 1998 dollars) with the last project ending in 2008. Groundwater remediation and some surveillance and monitoring will continue beyond 2008 at some sites.

The overall site planned completion dates are as follows:

<b>Site</b>	<b>Date</b>
Columbus Environmental Management Project	
West Jefferson Site .....	2005
Columbus Environmental Management Project	
King Avenue Site.....	1998
Fernald Environmental Management Project .....	2008
Miamisburg Environmental Management Project ..	2005
Ashtabula Environmental Management Project ....	2003
West Valley Demonstration Project .....	2005

The projected cost profile for environmental management associated with the Ohio Field Office is developed by combining the cost estimates in each of the Project Baseline Summaries. Exhibit E-46 displays the resultant baseline cost profile.

**E.8.3 Work Scope Summary**

EM’s mission at Ohio consists of various projects focused on the general tasks of decontamination, deactivation, excavation and treatment of contaminated soils, groundwater remediation, the vitrification of high-level waste (West Valley), along with many others. At the Columbus Environmental Management Project King Avenue site, the major work scope revolves around the decontamination of the remaining buildings. The decontamination approach for the buildings follows a standard flow beginning with a physical and radiological survey and ending with the full completion of the decontamination after proceeding through a series of prescribed steps. At the Columbus Environmental Management Project West Jefferson site, a significant effort will be required to process highly contaminated equipment and materials prior to beginning interior decontamination. However, there are a few facilities at the West Jefferson site, the JN-1 hot cells, which will involve a more extensive effort, using remote-controlled operations to reduce levels of contamination within highly