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**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT FACT SHEET**

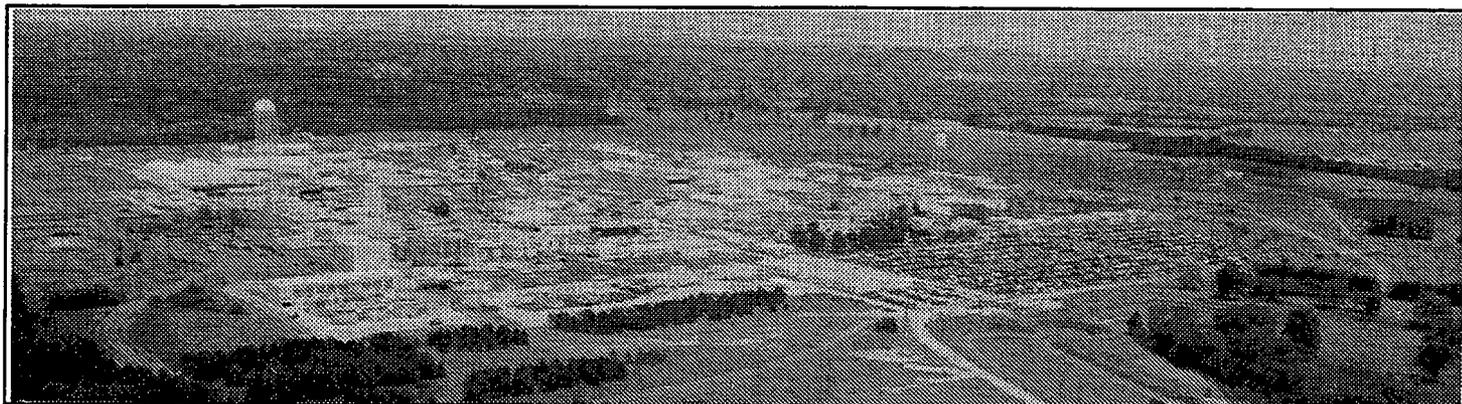
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FACT SHEET



**FERNALD**  
Environmental Management Project

# FACT SHEET



## Background

The Fernald Environmental Management Project is located about 18 miles northwest of Cincinnati, Ohio. Between 1953 and 1989, the facility produced uranium metal products for the nation's defense programs. Fernald's products were used in production reactors to make plutonium and tritium at other U.S. Department of Energy (DOE) sites. Fernald's uranium metal production was suspended in July 1989 to focus resources on environmental restoration.

The Fernald Environmental Restoration Management Corp. (FERMCO) is managing all cleanup activities at Fernald under a contract with DOE. FERMCO is a wholly-owned subsidiary of Fluor Daniel Inc., of Irvine, Calif. The FERMCO team is comprised of Fluor Daniel, Jacobs Engineering Group Inc., Haliburton NUS Environmental Services, and Nuclear Fuel Services. FERMCO assumed responsibility for the cleanup in December 1992. Prior to that, a subsidiary of Westinghouse Electric Corp. was the managing contractor at Fernald from January 1986 to November 1992. Westinghouse was preceded at Fernald by National Lead of Ohio, the original managing contractor from 1951 to 1985.

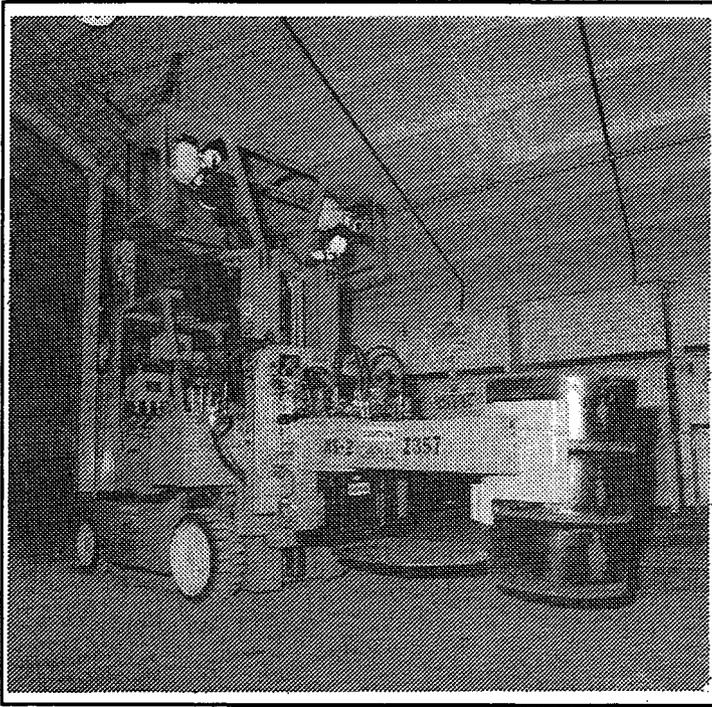
## Cleanup Mission

Since production operations were discontinued in 1989, the Fernald work force has been dedicated entirely to environmental restoration. In December 1989, the site was added to the U.S. Environmental Protection Agency's (EPA) National Priorities List of federal facilities in need of remediation. In February 1991, the DOE announced its intention to formally end Fernald's production mission. That closure

became effective in June 1991. During the following October, program management responsibility within the DOE was transferred from Defense Programs to the Office of Environmental Restoration and Waste Management (now the Office of Environmental Management). The DOE Ohio Field Office located in Miamisburg, Ohio, oversees the DOE Fernald Area Office, which has responsibility for all aspects of Fernald's full-scale environmental restoration and waste management effort. Under an accelerated remediation plan, the final cleanup effort at Fernald is expected to be completed in approximately 10 years, with aquifer restoration activities extending another five years.

**Fernald Environmental Management Project**

**Fernald Site Vitals**  
 Owner: United States Department of Energy  
 Managing Contractor: Fernald Environmental Restoration Management Corp. (FERMCO)  
 Historical Mission: Production of uranium metal forms (1953-1989)  
 Current Mission: Environmental restoration  
 Total Area of Site: 1,050 acres  
 Former Production Area: 136 acres



*A remote-controlled forklift aids in the safe relocation of drums requiring overpacking.*

## **Environmental Compliance**

Many of the environmental, safety, and health regulations that are now applicable at the Fernald site did not exist in the 1950s and 1960s when the plant was in full production. It was not until the early 1970s that environmental consciousness was raised on a national scale, with particular focus on the environmental effects of the industrial revolution.

To address the releases and threats of releases of hazardous substances from containers and facilities at Fernald, the DOE and the U.S. EPA entered into a Consent Agreement, in 1991, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). As part of CERCLA, a comprehensive remedial investigation/feasibility study (RI/FS) is being conducted in and around the Fernald site in conjunction with the U.S. EPA and the Ohio EPA to identify appropriate remedial actions. Nearly complete, the RI/FS has resulted in thorough site characterization, evaluation of cleanup alternatives, public review and comment, and selection of preferred final remedial actions. Environmental restoration efforts under the RI/FS have been divided into operable units, addressing specific areas/facilities and remedies at the site.

Operable Unit 1 includes Waste Pits 1 through 6, a burn pit and a clearwell. Operable Unit 2 includes a sanitary landfill, lime sludge ponds, an inactive fly

ash disposal area, an active fly ash pile, and the South Field Area. Operable Unit 3 encompasses the former production area, including all former process buildings, structures and equipment, inventoried hazardous materials, scrap metal piles, and the fire training area. Operable Unit 4 includes K-65 Silos 1 and 2, which contain radium-bearing wastes; Silo 3, which contains dried uranium-bearing wastes; and Silo 4, which is empty. Operable Unit 5 includes groundwater, surface water, soil, sediments, air, vegetation and wildlife throughout the Fernald site and surrounding areas.

By the end of 1996, all key cleanup decisions for the Fernald site will have been made, with full participation from federal and state regulators and the public. Fernald's primary cleanup plans include: excavation, treatment, and off-site disposal of the site's most contaminated materials; excavation and on-site disposal of less contaminated waste materials in an on-site engineered disposal facility; dismantling of buildings and other structures; and treatment and discharge of contaminated groundwater. A determination of the final disposition of building materials from the interim remedial action will be included in the Operable Unit 3's final record of decision (ROD), scheduled for completion this summer.

After 10 years, Fernald is nearing the conclusion of the RI/FS process, with RODs approved for four out of the five operable units. As the RI/FS concludes, attention at Fernald is now being directed to the safest and most efficient implementation of remedial actions.

## **Waste Management**

Waste at Fernald falls generally into three categories: low-level radioactive waste, hazardous waste, and mixed (radioactive and hazardous) waste. The waste is stored in six pits, three silos, and thousands of 55-gallon drums and other containers. The treatment, storage, and disposal of hazardous waste must meet requirements of the Resource Conservation and Recovery Act of 1976 (RCRA) and its subsequent amendments. Characterization and analysis of all waste material at Fernald is necessary to determine the precise nature, quantity, and location of each kind of waste, and how each should be handled under RCRA. Ongoing waste management activities include sampling of suspect RCRA materials, overpacking deteriorated drums to prevent escape of radioactive and hazardous materials into the environment, and proper storage and handling of RCRA regulated waste.

Waste material regulated under RCRA requires stringent storage and handling methods. Under its RCRA Implementation Plan, DOE has established configured hazardous waste accumulation areas at several locations throughout the facility and implemented procedures for regular and frequent inspections. RCRA storage warehouses are equipped with security, emergency response, and environmental protection capabilities. Other buildings on site also have been refurbished to allow safe storage of hazardous materials.

DOE has an aggressive program in place to ship low-level radioactive waste offsite for disposal. This waste includes waste generated from construction and restoration activities, characterized backlog waste, and scrap metal.

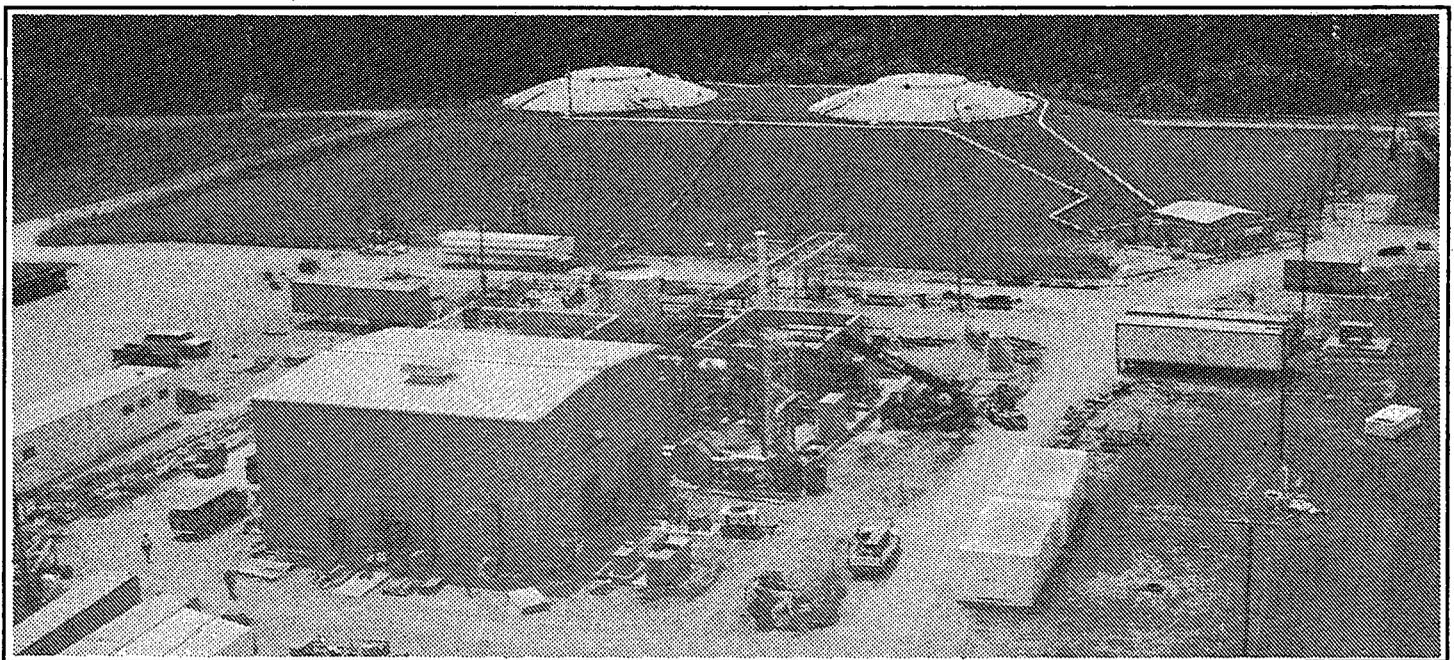
In 1995, Fernald completed treatment and stabilization of over 205,000 gallons of uranyl nitrate hexahydrate (UNH), 6,000 gallons of hydrofluoric acid (HF), and 21,000 gallons of 30,000 total gallons of nitric acid. In addition, final rinse of the thorium nitrate holding tank was completed less than two months after the processing of the acid material began and six

months after the contractor for the project was selected.

After completing its fiscal year 1995 waste shipping goal early. As of May, approximately 113,288 cubic feet of waste were shipped to NTS. The fiscal year 1996 goal is to ship 309,000 cubic feet of waste to NTS.

DOE is also preparing to activate a vitrification pilot plant facility in which Operable Unit 4 surrogate and silo wastes will be transformed into a stable, durable glass-like substance to be shipped off site for disposal.

In support of the on-site disposal facility construction project, several significant field activities have begun on the east side of the Fernald site. Workers have begun identifying the location of drain tiles and characterizing soils in the east field. Trenching activities will be performed to determine if water will be encountered during construction of the disposal facility. Also, cultural resource artifact recovery activities will be conducted at three locations in the east field area.



*Pilot Plant will convert waste in K-65 silos to glass pellets for shipment to NTS for permanent disposal.*

## For More Information

Fernald's active public participation program keeps Fernald area residents and other "stakeholders" informed of cleanup and other activities in progress and provides opportunities for public input in key decision-making process. Fernald's Envoy Program is designed to improve decision making by using site employees to build closer relationships with stakeholder groups on a person-to-person basis.

The Fernald Citizens Task Force — EM's first site specific advisory board comprised of Fernald community leaders from key stakeholder groups — was created to help guide cleanup at Fernald. The task force is comprised of representatives of the constituencies affected by cleanup decisions, including Fernald area residents, labor organizations, local governments and local businesses. In July 1995, the Fernald Citizens Task Force issued its final report to the DOE. The final report recommended remedial action priorities; cleanup levels projected to save \$1 billion if adopted; waste disposition alternatives; and future uses for the Fernald site following remediation.

Fernald area citizens and employees are forming a new community group to advise the DOE on local community transition and economic development issues following remediation of the Fernald site. This new community group, the Community Reuse Organization (CRO), will be a diverse mix of local residents; elected officials; representatives from educational, local business and financial institutions; Fernald employees; economic development agencies; the Fernald Citizens Task Force; and representatives of other public interest groups.

Numerous publications are available about the Fernald Environmental Management Project. The Administrative Record, a compilation of detailed reports, records, and other documents related to the CERCLA cleanup effort at Fernald, is available for public viewing in the JAMTEK building located at 10845 Hamilton-Cleves Highway, Harrison, Ohio, just south of the Fernald site.

For more information about Fernald, please call 513-648-3153 or write to: Gary Stegner, Public Information Director, DOE Fernald Area Office, P.O. Box 538705, Cincinnati, Ohio, 45253-8705.

