2768

fernald Report

January 2000

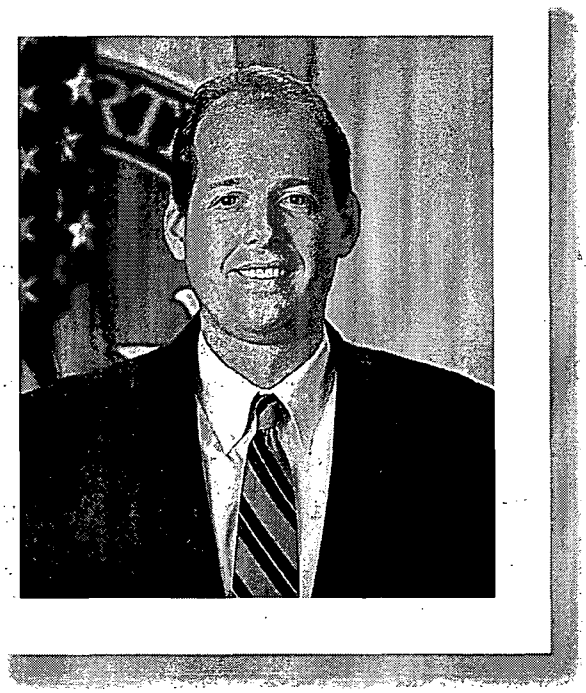
Inside

- Fernald receives Integrated Safety Management Approval
- Year in review
- International Award recipient

message from
Jack Craig

Integrated Safety Management Approval

Fernald has taken another step to keep safety as the number one priority on site. In a recent address to all DOE and contract employees, the Secretary of Energy, Bill Richardson affirmed his "personal commitment to the goal of safety excellence and to attaining this goal through the principles of Integrated Safety Management (ISM)."



ISM is a program within the DOE Complex that assures safety is integrated into management and work practices at all levels of the organization. At Fernald, ISM is an extension of the successful Safety First Program that has been in place since 1994. Secretary Richardson expects all DOE sites to have verified that ISM systems are completely in place by September 2000.

Fernald has met Secretary Richardson's expectation and the site has done this nine months ahead of the scheduled date. In December an independent DOE team verified that the site had thoroughly implemented the ISM program and recommended that Fernald receive approval for its ISM program. I believe that one of the keys to the success of the program is that everyone involved with the program understood their roles and responsibilities in integrating safety into all aspects of Fernald operations.

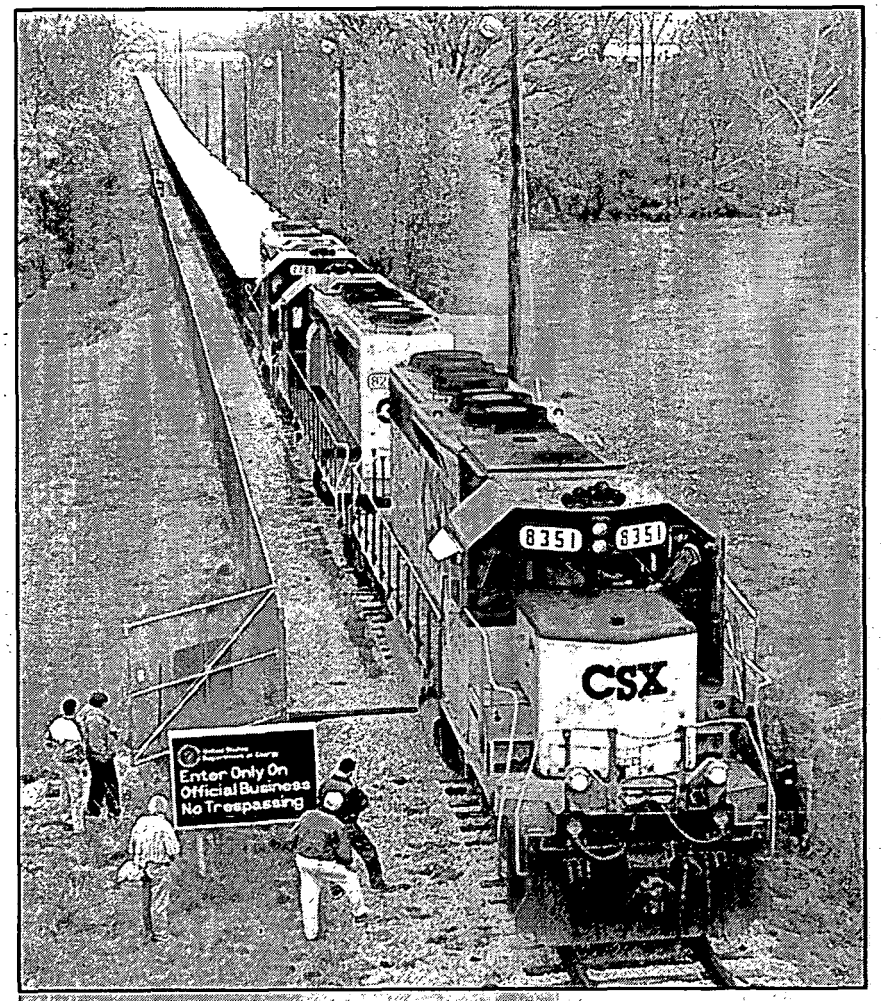
Obtaining ISM verification is a great accomplishment for the site. This accomplishment shows Fernald's true commitment to safety by protecting the workers, the public and the environment.

Jack Craig
Director, DOE-Fernald

2

On the cover: *Archeologist Tom Fugate, conducts a Cultural Resource survey looking for Native American artifacts. To date, 134 Native American prehistoric sites and 40 historical home sites have been located on Fernald's property (7248-d19).*

1999 the year in review



The last year of the century was a good one for the Fernald Environmental Management Project in terms of visible cleanup progress. With buildings coming down and the On-Site Disposal Facility going up, the site looks dramatically different than it did 12 months ago. "We try to take a tour at least once a year to see what's going on at the site," said former Crosby Township trustee Gary Storer. "I think the progress might not seem as dramatic for the people who see it every day, but when you look at it from a fresh, yet informed perspective, the progress being made is truly impressive."

Each of the site's six major projects has accomplished significant milestones during the last year, bringing the ultimate goal of site closure noticeably closer. The following are some of the highlights of the past 12 months.

Waste Pits Project

- Initiated waste loading operations in February 1999.
- Transported first unit train to Envirocare in April – 89,631 tons transported (16 trains) in 1999 .
- Initiated waste pit excavation in September 1999.
- Procured, modified, inspected and received 170 gondola railcars.

Soil and Disposal Facility Project

- Placed approximately 280,000 cubic yards of compacted contaminated soil and debris into the On-Site Disposal Facility.
- Certified an additional 10 percent of the site (for a total of 35 percent) as having attained final soil cleanup levels.
- Completed soil and at-/below-grade structure remediation in the old Sewage Treatment Plant and surrounding area.
- Completed in-situ chemical stabilization and excavation of 3,500 cubic yards of lead-contaminated soil in the Trap Range and Firing Range.

Decontamination and Dismantlement

- Completed Safe Shutdown of the site's nuclear facilities.
- Awarded contracts for the demolition of Plant 5 (former Metals Production Plant) and Plant 6 (former Metals Fabrication Plant).
- Completed demolition of the Maintenance Building/Tank Farm Complex.
- Dismantled 16 additional site structures.
- Since 1994, 70 of the site's 200 structures have been demolished.

Above left: A train carrying Waste Pit material prepares to leave the Fernald site. It would take about five trucks to carry what one gondola railcar can transport (6944-d784).

3

Silos Project

- Awarded contract for remediation of Silo 3 to Rocky Mountain Remediation Services.
- Awarded contract for Accelerated Waste Retrieval for Silos 1 and 2 to Foster Wheeler Environmental.
- Completed dome resealing of Silos 1 and 2 to reduce radon emissions.
- Completed Silos infrastructure project.

Aquifer Restoration

- Treated more than 2 billion gallons of water through the Advanced Wastewater Treatment Facility.
- Completed a one-year groundwater re-injection demonstration.
- Removed more than 5.25 billion gallons of contaminated water from the Great Miami Aquifer.

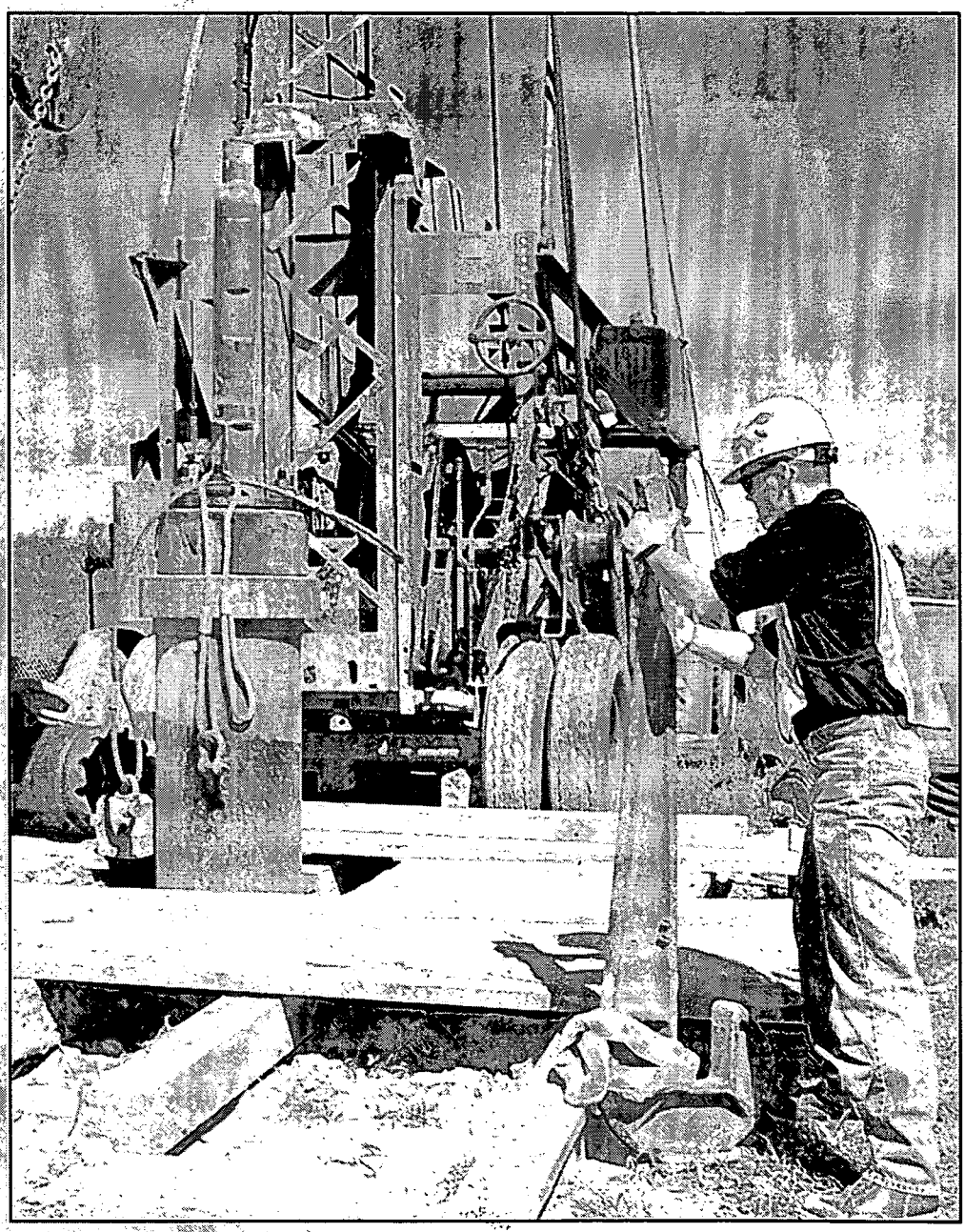
Waste Management

- Completed 51 shipments of low-level waste to the Nevada Test Site.
- Completed 10 shipments of liquid mixed waste to the Toxic Substance Control Act (TSCA) Incinerator in Oak Ridge, Tenn.
- Completed 129 shipments of nuclear product/material to Portsmouth.
- Completed 102 shipments of nuclear product/material to private sector locations.

Safety

The Greater Cincinnati Building and Construction Trades Council achieved seven years without a lost-time accident while Fluor Fernald team members continued to work more than 3.2 million safe work hours. This record is especially significant when considering the challenging nature of the work at the site.

Below: A drill operator prepares to place a well casing in the ground for an extraction well that will be used to pull contaminated water from the aquifer (7207-d22).



4

The Fernald Environmental Management Project was selected by the International Association for Public Participation as the Public Participation Organization of the Year. The site received this honor for the strides it has made in informing the public about complex issues and achieving consensus decisions in a very difficult arena.

By working collaboratively with stakeholders, regulators and labor unions, the Department of Energy and Fluor Fernald have established the site's cleanup priorities and developed a comprehensive plan to accomplish those tasks safely and efficiently.

Above: Thanks to the efforts of groups such as the Fernald Citizens Advisory Board, Fernald Community Reuse Organization (above), Fernald Residents for Environmental Safety and Health and the Fernald Envoys, Fernald was named the Organization of the Year by the International Association for Public Participation (6529-d34).

Planned activities for 2000 include:

- Complete the remediation of the Southern Waste Units and soil stockpiles ;
- Place approximately 270,000 cubic yards of material into Cells 1, 2 and 3 of the On-Site Disposal Facility;
- Reach design height in the first cell of the On-Site Disposal Facility;
- Initiate pre-demolition activities in Plant 6, the former Metals Fabrication Plant;
- Isolate the utilities to approximately 25 percent of the former process area;
- Begin remediation of Silo 3 and Accelerated Waste Retrieval for Silos 1 and 2;
- Prepare an evaluation of the groundwater re-injection demonstration;
- Transport approximately 70,000 cubic feet (67 shipments) of low-level waste to the Nevada Test Site;
- Transport approximately 60,000 gallons of liquid mixed waste to the TSCA Incinerator;
- Transport approximately 2.9 million net pounds of nuclear product/material to Portsmouth; and
- Transport 20 trains of waste pit material to Envirocare.

All of these activities will be accomplished while maintaining an unwavering commitment to safety.

5

Left: In a historic visit, Secretary of Energy Bill Richardson praised Fernald team members and stakeholders on the completion of Safe Shutdown and the progress being made cleaning up the site (7084-d20).

The Department of Energy and Fluor Fernald took a giant step closer to achieving the goal of cleaning up the Fernald site by completing Safe Shutdown. To understand the enormity of this accomplishment, consider this: over the past four years, employees prepared 10 complexes for demolition, removing more than a half million pounds of hazardous material in the process.

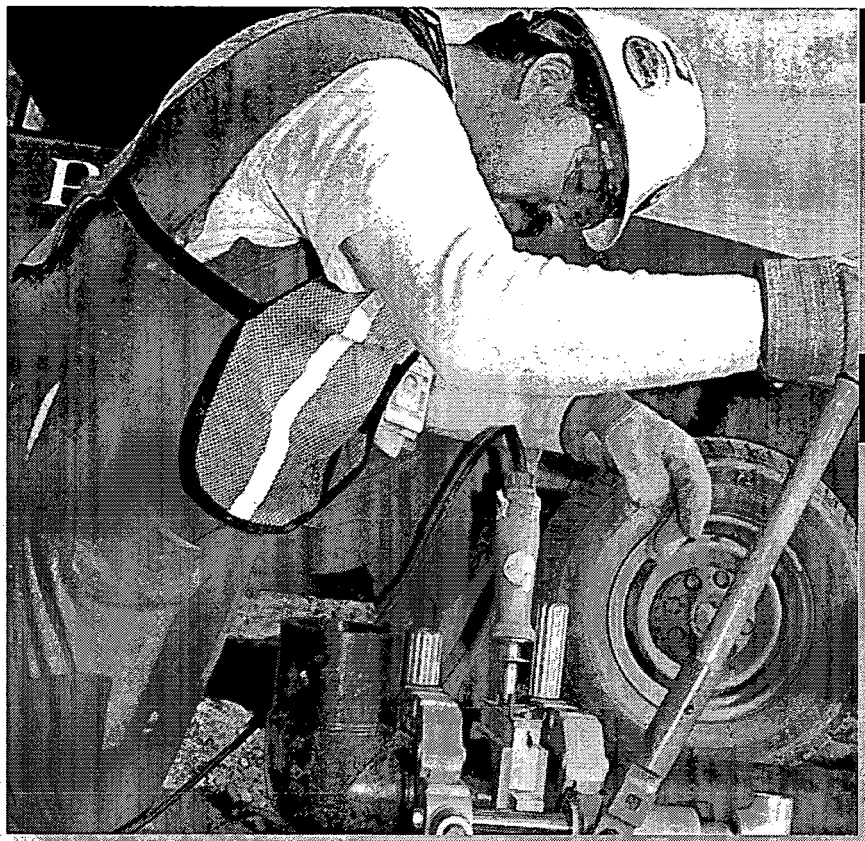
The completion of this project required a monumental effort. Working under adverse conditions, the team pulled together to get the job done safely and on schedule.

Safe Shutdown received Fluor Daniel's Tri-Star Award, the company's highest award for safety. The group earned this recognition by working 250,000 hours without an OSHA recordable incident. According to Monty Morris, the Fluor Fernald project manager, one of the reasons for the project's success was management's commitment to seek input and implement the suggestions received from team members.

Most of the team responsible for the completion of Safe Shutdown have moved on to other projects, with a small group remaining to focus on Facilities Shutdown. Facilities Shutdown prepares the site's non-nuclear facilities for demolition and should take approximately three years to complete.

The Safe Shutdown team was recognized for its contributions to the overall cleanup progress at a ceremony on March 22, attended by Energy Secretary Bill Richardson, Fluor Corp. Chairman and CEO Philip Carroll, AFL-CIO Metal Trades President John Meese, Ohio EPA Director Chris Jones, dignitaries from around the country, neighbors and the media. The ceremony was planned to thank the employees for their hard work and dedication.

Cleanup **Progress** Update



Waste Pits Remedial Action Project (WPRAP)

- Shipped trains fifteen and sixteen to Envirocare of Utah
- Initiated waste dryer operations
- Continued excavation of material from Waste Pits

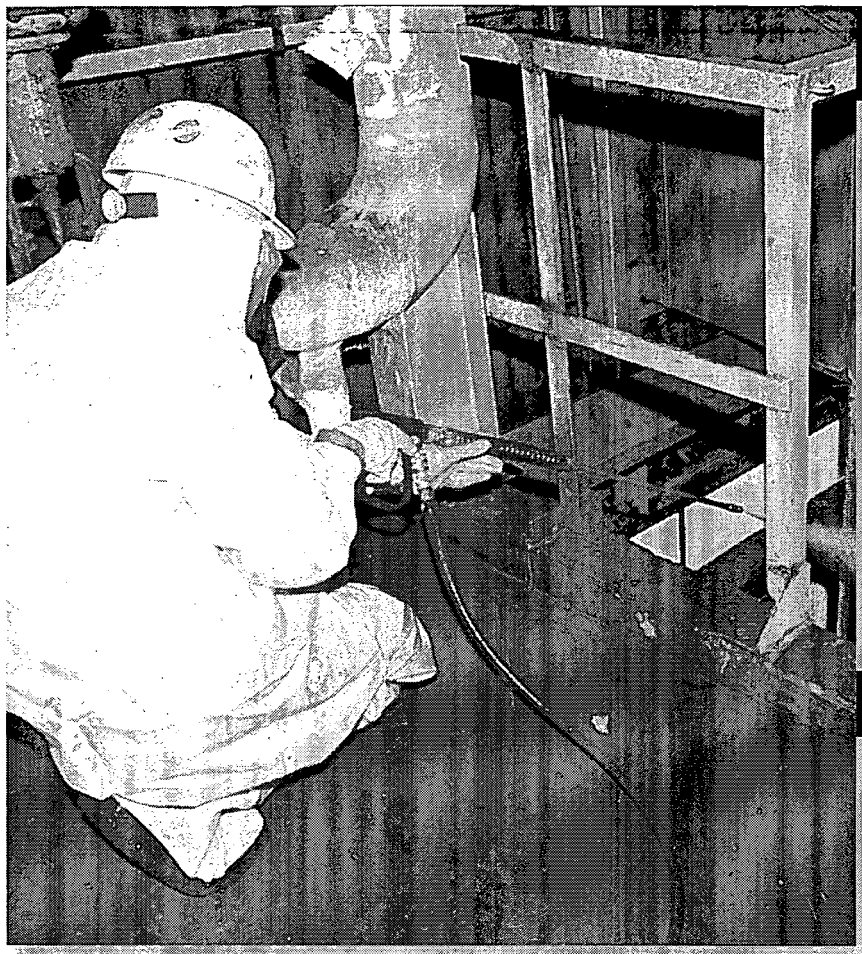
On-Site Disposal Facility (OSDF)

- Completed 1999 waste placement; placed 227,536 cu. ft. between June and December 1999
- Completed placement of three feet of protective cover in Cell 3
- Initiated OSDF Phase III design package preparation and procurement

Above:
A pipefitter fusion welds pipe that will carry water to the cell for the control of dust (6319-d2267).

Right:
A Fluor Fernald team member loads a railcar of pit waste in the Railcar Loadout Building for a future shipment to Envirocare (6944-d963).

Cleanup **Progress** Update



Demolition Projects

Facilities Shutdown

- Continued work on General Sump Complex

Decontamination & Dismantlement (D&D)

- Plant 5 Complex —
  - Continued asbestos abatement, interior transite removal, and gross washdown in Building 5A
  - Completed interior transite removal in Building 55A and initiated release cleaning
  - Began exterior transite removal on Building 55B
- Plant 6 Complex—
  - Began set-up of subcontractor trailer facilities

Silos Project

- Conducted public workshop for stakeholders in vicinity of Nevada Test Site on *Comparative Analysis of Alternatives for Silos 1 and 2 Draft Revised Feasibility Study/Proposed Plan (FS/PP)*
- Submitted *Silos 1 and 2 Draft Revised FS/PP* to regulators for review and approval, in advance of Feb. 1, 2000, milestone date
- Submitted Draft Remedial Design Package for AWR Project to regulators for review and approval

Above: A DEMCO employee pressure washes an air handling unit that was previously used for heating and ventilation in Building 5A during production (6401-d296).

Left: An aerial view of the Silos. Significant infrastructure improvements have been made to prepare for waste retrieval and remediation (7213-d145).

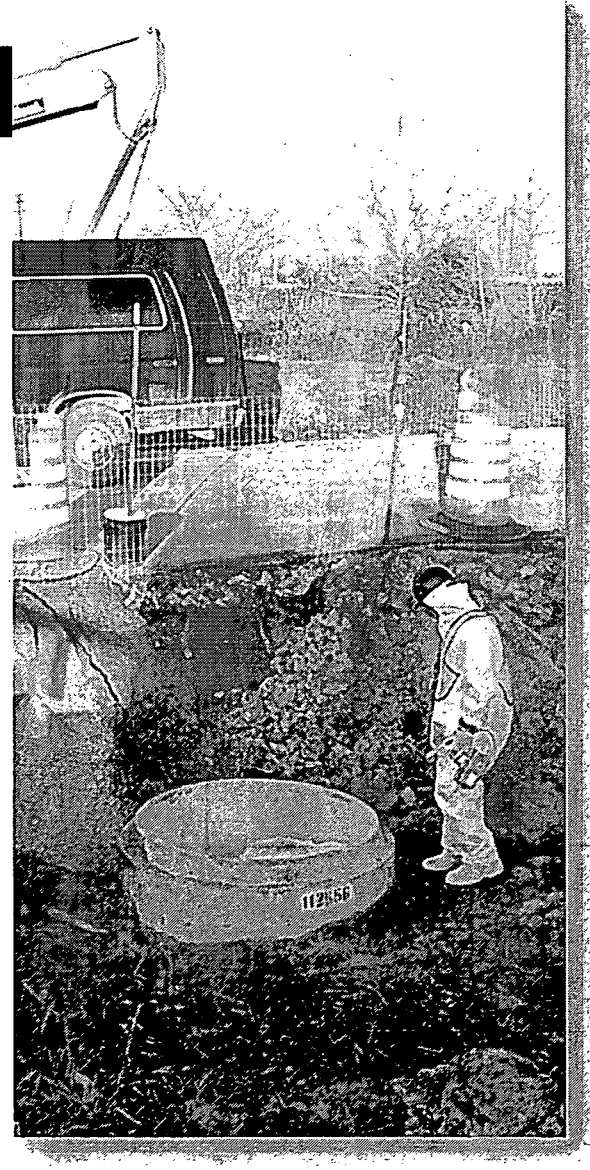
8

Aquifer Restoration/ Wastewater Project

- Continued construction of two new extraction wells in South Field Area
- Conducted 60 percent review of new Leachate Transmission System
- Completed construction of Multimedia Backwash Reroute Project
- Began pre-design profile sampling of aquifer contamination in Waste Storage Area

Soil Characterization and Excavation Project

- Area 2 Phase I—Southern Waste Units (SWUs)
  - Continued excavation of South Field
  - Continued excavation of the Active Flyash Pile
- Area 2 Phase II—Area North of SWUs, and South and West of Former Production Area
  - Continued real-time scanning and field demonstration of handheld ground-penetrating radar
- Areas 3, 4 and 5 — Former Production Areas
  - Continued preparation of 90 percent Title II design for Area 3A/4A
- Natural Resource Restoration Projects
  - Developing draft master plan for *Public Use of the FEMP*, which is Addendum D to the previously issued *Natural Resource Restoration Plan*



Top:
Roger Knight, Soil & Water projects team member uses a high purity germanium detector to obtain real-time measurements for contaminants. This information will be used in the excavation plan for the 2000 construction season (6734-d1080).

Right:
Wise Services installs a manhole that ties into the existing storm sewer system and will be used to drain the lime sludge ponds (7063-d18).

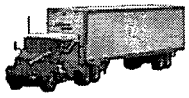
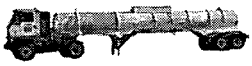
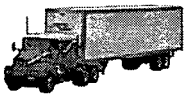
9

Waste Management Projects

- Site Treatment Plan —
  - Submitted 1999 Annual Update to regulators
- Liquid Mixed Waste Bulking Project —
  - Received State of Tennessee approval of application for shipment of Batch 9 (approximately 17,000 gallons) to TSCA Incinerator in Oak Ridge, Tennessee
- Nuclear Materials Disposition —
  - Continued preparation of 1,477 boxes of uranium cores for overpacking and shipment; 667 boxes prepared in project
  - Continued movement of uranium product to DOE-Oak Ridge site at Portsmouth, OH; total of 18 shipments during December

Left: Waste Treatment project team members re-package liquid material into 55-gallon poly lined drums, which will be stored in TS-6 until a treatment or disposal method is determined (7251-d06).

Fernald Shipments — December 1999

Contents / Destination	Shipment Mode	No. of Shipments	Monthly Total	FY00 Total
Low-Level Waste (Nevada Test Site)		0	0 cu. ft.	0 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		0	0 gal.	0 gal.
Nuclear product/materials (Portsmouth)		18	582,127 net lbs. or 261.1 metric tons uranium	1,455,393 net lbs. or 583.5 metric tons uranium
Waste Pits Project (Envirocare of Utah, Inc.)		2 unit trains (103 railcars)	11,091 tons	40,395 tons (376 railcars)

10.

Graphics # 5949

FLUOR FERNALD positioned for closure

Earlier this month, Fluor Fernald announced its plans for restructuring the company as it implements site closure. "Fluor Fernald reached many milestones for the Department of Energy by ensuring we had the right skills in the right place at the right time," said John Bradburne, company president and CEO. "This is the next step to ensure a safe and well-managed cleanup at Fernald as we move into the home stretch of site closure."

Two of the most visible changes within the management structure is the addition of a Site Closure Office headed by Terry Hagen and the appointment of Dennis Carr to executive vice-president of Environment, Safety, Health and Quality. Hagen's role will be to synchronize the four divisions executing fieldwork so that each achieves long-term cleanup goals while reaching near-term milestones. "Three years ago we realigned our organization as we designed and initiated our selected cleanup remedies," Hagen said. "Now that most of our cleanup projects are mature and in the field implementation phase, it's the right time to get our team members and the organization aligned to focus completely on execution of fieldwork." Carr's addition as executive vice-president does not come as a surprise. Carr has over 20 years of experience at Fernald and has led the Soil and Water Projects Division for the past three years.

At a series of employee meetings, Bradburne walked through the changes and answered questions. He also unveiled the company's new name, Fluor Fernald, Inc., which reflects Fluor Corporation's decision last year to position Fernald within Fluor Global Services. While the name change is not expected to have a dramatic impact on the 1800 workers at Fernald, it is another sign of Fluor's commitment to the federal services arena.

"We are extremely pleased with our accomplishments in 1999, but this is no time to sit back and page through the yearbook," Bradburne said. "DOE expects excellence from its contractors and Fluor Fernald is positioned to deliver accelerated cleanup as we have committed to the public and regulators."

Fernald wins international award

The International Association for Public Participation has selected the U.S. Department of Energy Ohio Field Office and Fernald Area Office to receive its Organization of the Year Award for the development of a Citizens Advisory Board dedicated to involving the public in decision making for the cleanup of Fernald. The judges cited DOE's success in "overcoming significant citizen distrust to achieve a complex consensus decision in a very difficult arena," and were also impressed with their "efforts to maintain an enduring and meaningful relationship with the public at the site."

Above: The Fernald Citizens Advisory Board has helped the site improve communication with community members and other DOE sites (7285-d22).

According to Ken Morgan, public information officer for the Ohio Field Office, Fernald is often used as a model for what public participation programs should be. "I am constantly asked how other sites can get to where Fernald is," he said. "This enviable position is the result of an unrelenting commitment to open, honest and timely communication."

Public involvement at the site has steadily improved throughout the last several years with the creation of the Envoy Program and monthly Cleanup Progress Briefings, in addition to the Citizens Advisory Board and the Community Reuse Organization. Stakeholders who were once vocal critics are now some of the site's greatest allies – because Fernald has become a better neighbor.

11

New documents added to the Public Environmental Information Center

The following information was added to the Public Reading Room, Administrative Record files and Post Record of Decision files at DOE's Public Environmental Information Center (PEIC):

- Waste Pits Remedial Action Project
  - DOE Letter: Operable Unit 1 Authorization for Full Scale Operations
- Soil Characterization & Excavation Project
  - Implementation Plan for Area 2, Phase III Part Two – Soil and Disposal Facility Project
  - Waste Acceptance Criteria Attainment Report for Removal Action 17 Stockpiles 1, 2 and 4
  - USEPA Letter: Area 2, Phase III Part One Certification Report (Approval)
- Silos Project
  - OEPA Letter: Approval of Silo 3 Project Site Preparation Package
- Aquifer Restoration Project
  - August 1999 Operating Report for the Re-injection Demonstration
- Miscellaneous
  - Consolidated Consent Agreement/Federal Facility Compliance Agreement/Federal Facility Agreement/Remedial Investigation/Feasibility Study/Consent Decree Monthly Report for the Period November 1, 1999, Through November 30, 1999
  - Final Integrated Environmental Monitoring Status Report for Third Quarter 1999

Fernald Report
Gary Stegner, Public Information Director
U.S. Department of Energy
Fernald Environmental Management Project
P.O. Box 538705, Cincinnati, OH 45253-8705
Telephone: 513-648-3153,
E-Mail: **gary_stegner@fernald.gov**
Fernald Web Site: **www.fernald.gov**