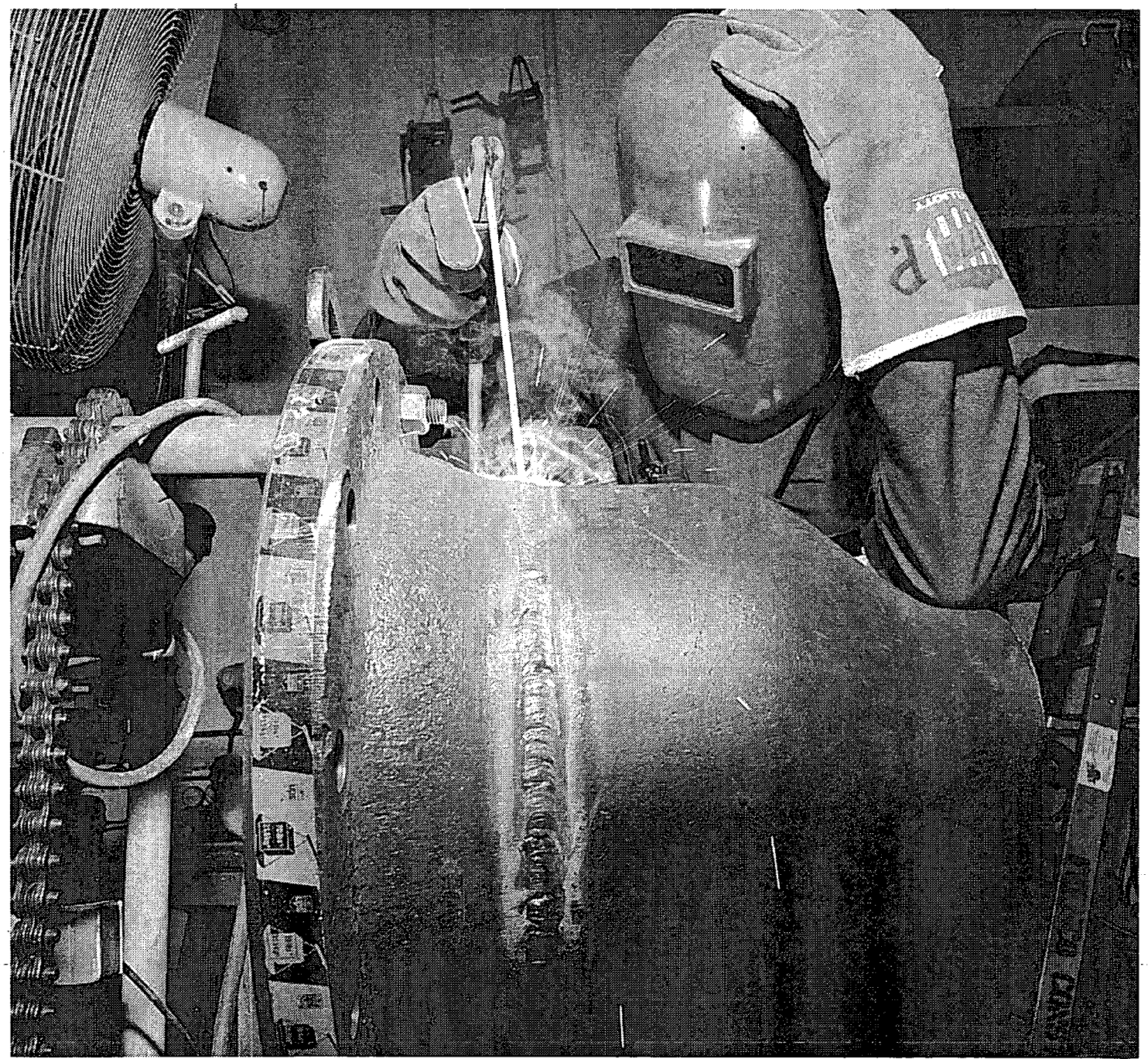
fernald Report

Inside

January 1998



message from Leah Dever

It has been eight months since Phil Hamric left as manager of the Ohio Field Office. During that time many have wondered, or worried, about what changes the future would bring. Would the new manager change the Ohio vision? Would my job change? Would everything change? Well, the wait is over. I am here now and I would like to discuss several things with you and let you know a little about me.

First, I am delighted to be here. This office has a reputation for innovation and leadership. More specifically, Fernald has learned how to work with the community and employees to make them part of a team. As a result, Fernald has been able to set and achieve realistic clean-up goals that not only save money but get the job done better. I am proud to be a part of that.

Second, because of Fernald's reputation, I have a great deal of confidence in employees and the many members of the community who have committed so much concern and energy to this project. I will rely on the people at Fernald to not only get the work done, but also, along with the community, show the way.

Third, don't expect big changes, instead, expect gradual change. The course ahead for Ohio has been set. I will build on that clear vision, the high values, and the effective strategy that is Phil Hamric's legacy.

This office will change now that I am here, but it would have changed in any case. The one thing we can count on is that things always change. My job is to manage change to ensure it is positive. I do that by managing processes. Our processes need to change to meet changing conditions. What worked last year may not work this year. Too much change can cause turmoil, inefficiency, and uneven growth. I think it is best when change comes slowly but steadily, the way a tree grows, year after year. That is the way it was on the Christmas tree farm where I grew up.

We don't really know each other yet and that is one of the first things I will be working to change. I have been visiting the five Ohio sites and will continue to do so. It will take a while for me to learn the different approaches each site takes to tackle its mission. Each community has its own personality and leadership. I'm curious to learn each site's style and culture, as well as its technical approaches. Part of that process will include getting to know many of you personally. I know that I need to earn your trust and loyalty, and that will take time.

Between where we are now and where we must go, will be many new obstacles and opportunities from which we can learn. It seems like that is what happens when you create the right environment for change - steady growth, like the tree farm back home.

Leah Dever
DOE Ohio Field Office Manager

On the cover: A team member welds a valve assembly for the T-Hopper Repackaging Project. (6714-38)

Fernald Teams Seek Solutions to Waste Shipping Incident

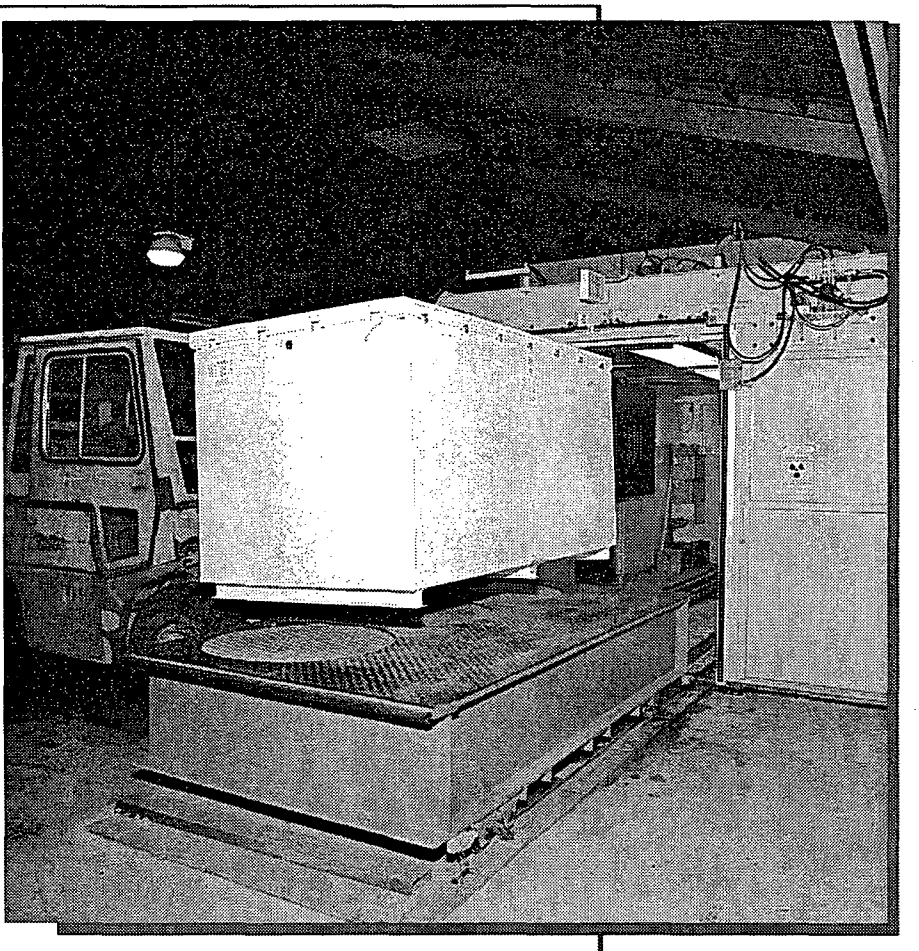
Last month a truck en route from Fernald to the Nevada Test Site (NTS) carrying depleted and slightly enriched materials began leaking. The seven boxes in this shipment included sand used to filter wastewater, filter cake from wastewater treatment operations and construction rubble. The driver noticed the leak while doing a routine inspection of his trailer in Kingman, Ariz., about 95 miles from the NTS. He had not noticed any leaks during an inspection at his previous stop. State and emergency agencies, along with the Fernald Emergency Operations Center, were notified.

A Radiological Assistance Program team from Albuquerque, NM. arrived and determined the material leaking from the truck was not radioactive and posed no threat to safety and health. DOE-Fernald and Fluor Daniel Fernald representatives arrived at the scene early the next morning and ensured the white metal boxes on the trailer were safely repackaged and sent back to Fernald.

A Radiological Assistance Program team from Albuquerque, NM. arrived and determined the material leaking from the truck was not radioactive and posed no threat to safety and health.

Currently all waste shipments from Fernald to the NTS have been halted until an incident investigation is completed. The accident investigation board is made up of representatives from Fernald, DOE-Idaho, DOE-Nevada, DOE-OH, DOE-Albuquerque and DOE-HQ.

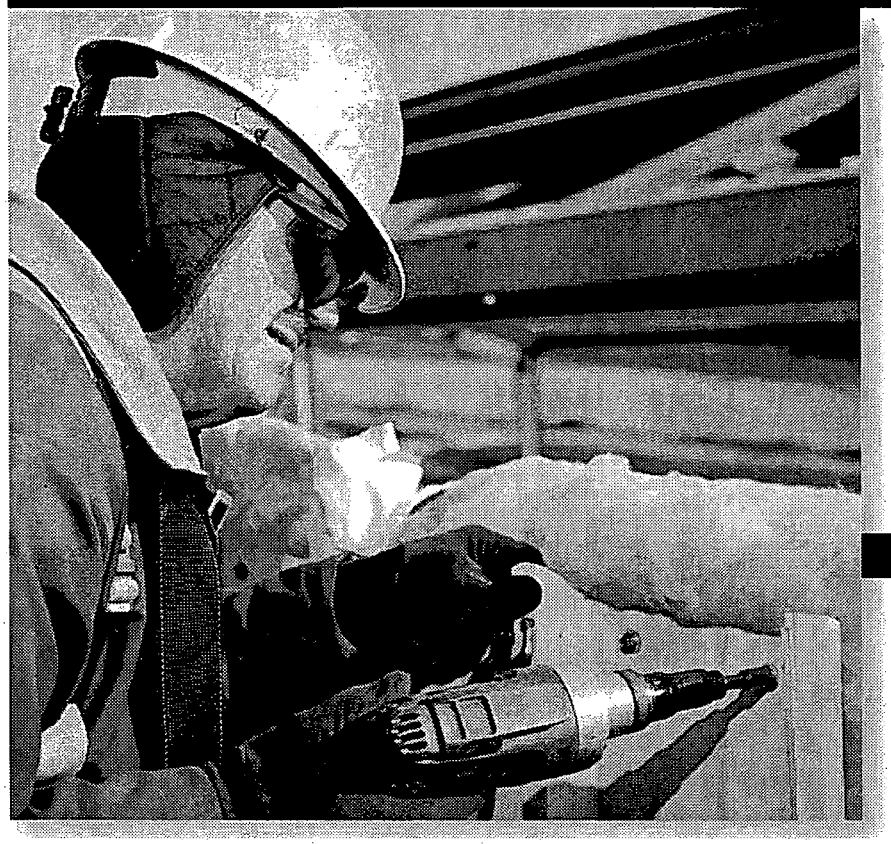
Upon its arrival back on site, the Fernald Waste Shipping Program began pursuing answers as to why the box had leaked. At this time engineers are looking at every aspect of the program to determine the root-cause. While there is to be no rush to make a judgement on the issue, DOE and Fluor Daniel Fernald intend to move quickly once corrective actions are identified. According to John Bradburne, Fluor Daniel Fernald president, "We know what happened, now it's a matter of finding out exactly why it happened. We'll look at all the possibilities and make necessary changes to ensure the safety and integrity of our waste shipments. In the meantime, we'll be talking to stakeholders here, and in Nevada, so they get the latest information and we get their input."



Above: The returned white metal box entering the real-time radioscopic unit used for internal inspection. Before leaving for NTS drums and boxes are examined in this chamber. (6788-112)

Cleanup **Progress** Update

Operable Unit 1



Waste Pits Remedial Action Project (WPRAP)

- Awarded contracts for Shandon Yard Improvements and Locomotive Maintenance Facility utilities installation
- Submitted Amendment to Final Remedial Action Work Plan for OU1 to Agencies, proposing enforceable milestone dates for submittal of IT Corp's Remedial Design and Remedial Action document packages
- Acquired two excess 60-ton locomotives from the Department of Defense

Operable Unit 2

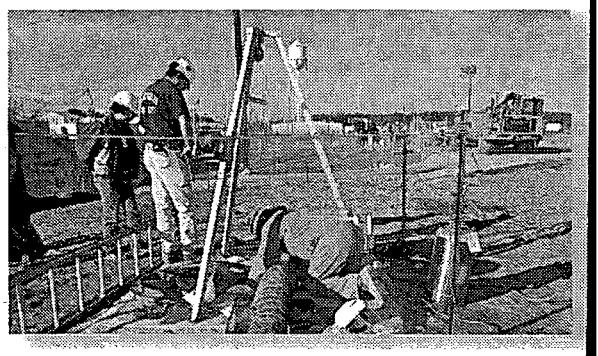
On-Site Disposal Facility (OSDF)

- Completed installation of Cell 1 secondary & primary composite liners, leak detection system, leachate collection system and protective cover; performed Standard Startup Review (SSR) & initiated first placement of impacted material
- Continued efforts to complete Leachate Conveyance System construction punchlist items; performed Integrated Construction Acceptance Testing, Systems Operability Testing, and SSR prior to beginning system operation
- Completed field work related to Relocated North Entrance Road and Haul Road; closed out project

Above: Steelworker attaching insulation and external sheet metal to locomotive maintenance facility (6349-1252).

Right: The first truckload of dirt is placed in cell #1 (6319-1050).

Far Right: Industrial Hygiene technicians monitor work at the Leachate Conveyance lift station (6584-171).



Operable Unit 3

Facilities Closure & Demolition Project (FC&DP)

Safe Shutdown

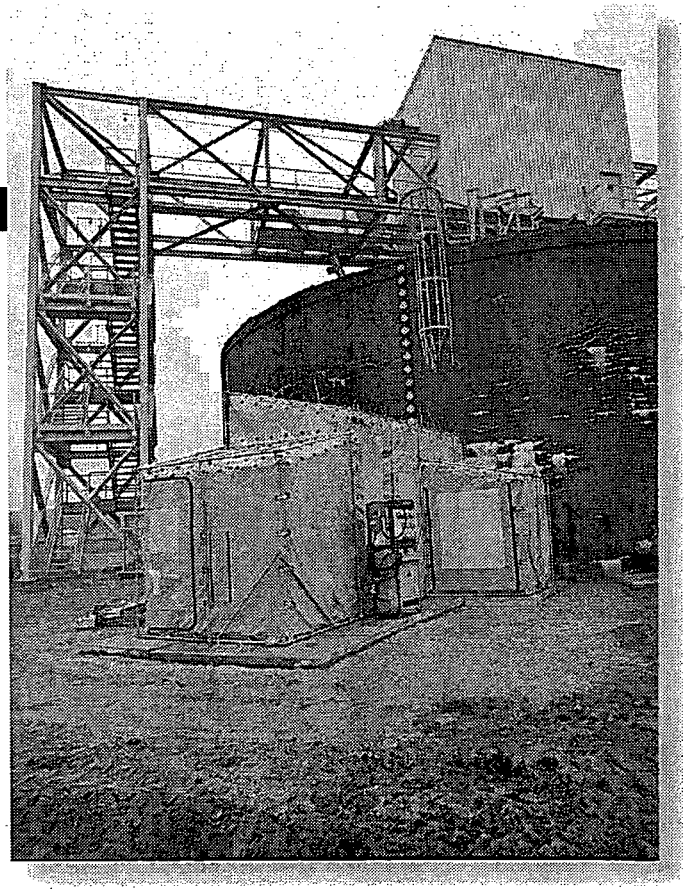
- Completed holdup material removal from various areas in Plant 8 and excavated domestic waterline
- Isolated utility lines and removed excess equipment from Building 78

Decontamination & Dismantlement (D&D)

- Boiler Plant/Water Plant —
  - Completed asbestos abatement/removal activities from boilers
  - Continued demolition of railroad tracks
  - Began transite removal at Boiler Plant
- Thorium/Plant 9 Complex —
  - Continued mobilization activities in Building 32 and Plant 9
  - Continued preparation/submittal of Safe Work Plans
  - Completed asbestos abatement, interior demolition and interior concrete removal in Building 32. Completed preparation activities in Plant 9 (set-up of vestibule, decontamination area, and waste handling area)

Left: Workers remove exterior transite from the north side of the Boiler Plant (6407-366).

Below: Support facility for Silo 3 Small-Scale Waste Retrieval test (6759-26).



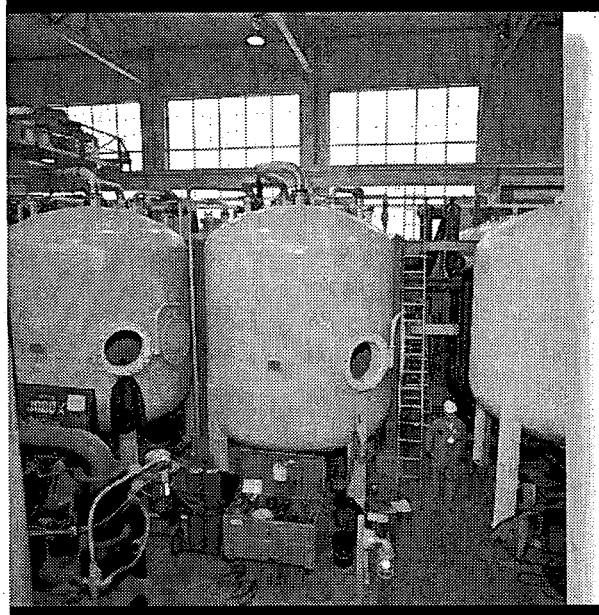
Operable Unit 4

Silos Project

- Prepared initial *draft Request for Proposal (RFP)* for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing; briefed stakeholders on both RFP and Initial Screening of Technologies for treatment of Silos 1 and 2 material
- Held public hearing on *Silo 3 Draft Final Explanation of Significant Differences (ESD)* Dec. 2, 1997 at Nevada Test Site Community Advisory Board meeting; closed public comment period Dec.16, 1997 and began preparation of Responsiveness Summary
- Began incorporation of comments received on *Silo 3 Draft RFP*
- Initiated System Operability/Mock-Up Testing of Silo 3 Small-Scale Waste Retrieval at Silo 4
- Convened Critical Analysis Team to evaluate conceptual strategy underlying Accelerated Waste Retrieval (AWR) project plans; team recommended continuing to pursue AWR
- Issued *Commerce Business Daily* announcement for AWR and Silos 1 and 2 Multi-Tech Proof-of-Principal Testing

Cleanup **Progress** Update

Operable Unit 5



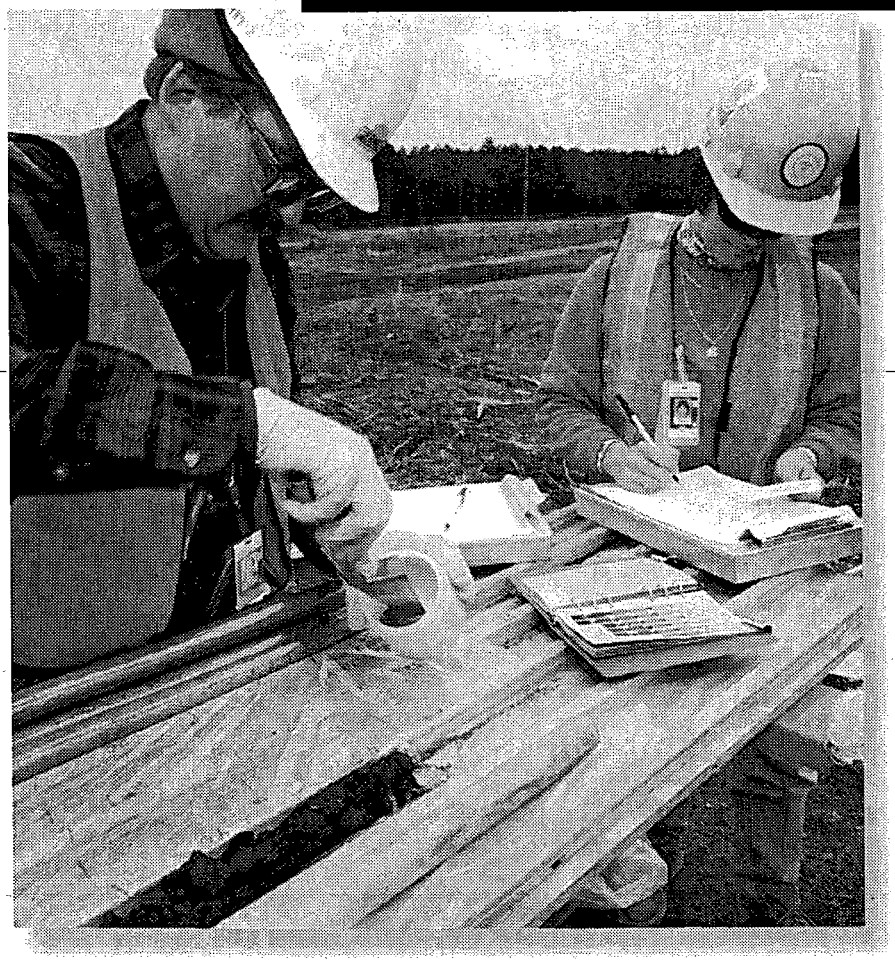
Right: The AWWT expansion project will increase water handling capacity by 1500 gpm, speeding aquifer remediation (5531A-981).

Below: A geologist prepares to classify soil taken from a geoprobe sample (6734-132).

Aquifer Restoration & Waste Water Project

- Awarded contract for interconnecting piping for new Sewage Treatment Plant
- Completed construction activities associated with Advanced Wastewater Treatment (AWWT) Resin Regeneration System
- Continued construction on:
  - AWWT Facility Expansion
  - South Plume Optimization
  - Injection Demonstration System
  - South Field Extraction System

Operable Unit 5

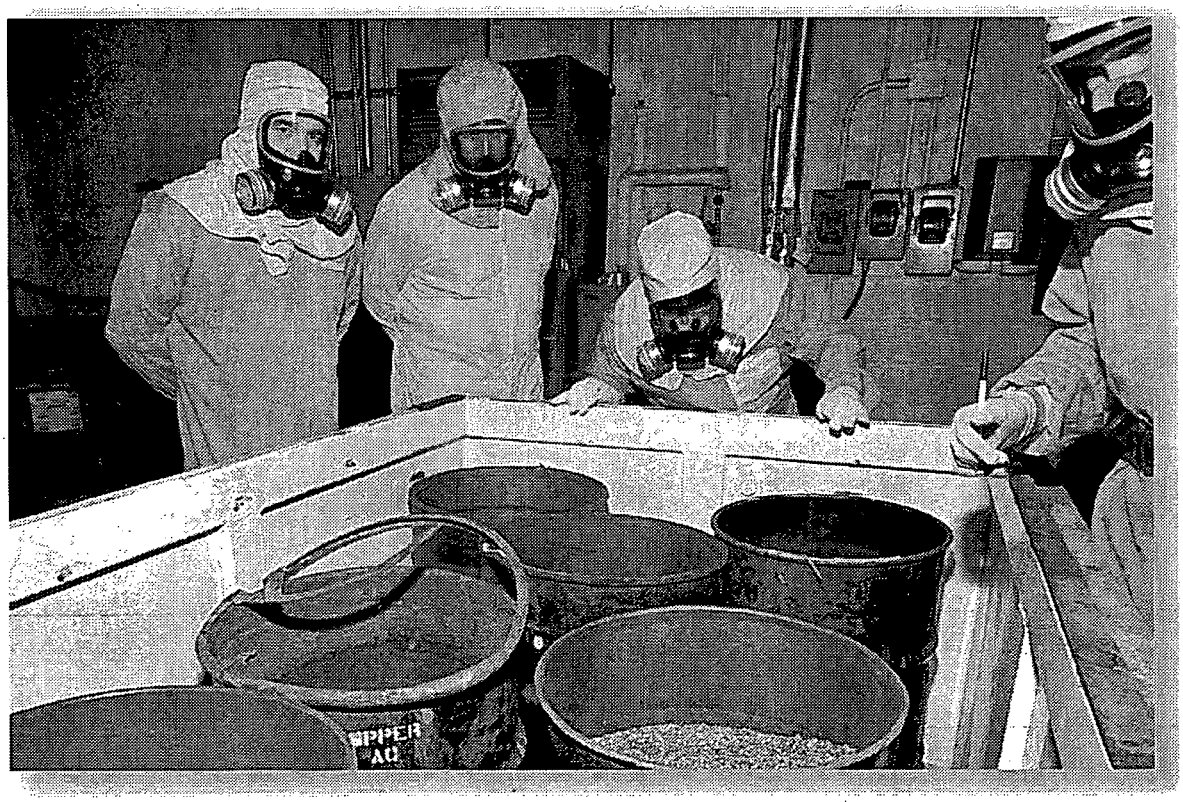


Soils Characterization & Excavation Project

- Submitted Paddy's Run Embankment Stabilization Project Work Plan and associated Conceptual Design Report to regulators
- Continued field implementation activities for Area 2 Phase I (Southern Waste Units) Site Prep Package (which includes such items as installation/maintenance of erosion and sediment controls, excavation of retention basins 2 and 3, and installation of infiltration barriers in retention basins 1, 2 and 3)
- Continued development of Integrated Remedial Design Package and Project Specific Plans for Area 3 (portion of former production area north of 2nd Street)

Waste Management/ Nuclear Materials Disposition Projects

- RCI Solvent Extraction Project — Completed demonstration phase; after examination of analytical results, it was determined that contract option for full-scale treatment will not be implemented
- Thorium Legacy Waste Stabilization Project — Submitted Final Technology Specific Work Plan to Ohio EPA
- Liquid Mixed Waste Project — Completed application to Toxic Substances Control Act (TSCA) Incinerator for Batch #7 (mixed waste) and completed sampling for Batch #8 (newly generated low-level waste); continued to evaluate newly generated waste streams for bulking into Batch #9 and Batch #10
- Nuclear Materials Disposition Operations — Approximately 1,500 cans containing enriched unrestricted materials (UF4) were repackaged in preparation for loading into International Shipping Organization (ISO) containers
- T-Hopper Repackaging System — Completed conditional construction turnover Dec.18, 1997



Above: Technicians adjust solar panels used to power long-term post closure radiation monitors (6795-9).

Left: Team members prepare to sample shredded copper prior to offering it for beneficial reuse. Much of the 96 tons of copper came from electric motor windings recovered from DOE's Gaseous Diffusion Plants (6780-1).

Above: Drillers insert a surge block in preparation of well development. The block is raised and lowered several times to help form a sand pack around the well screen (6501-31).

Subcontractors Celebrate Five Years of Safe Work

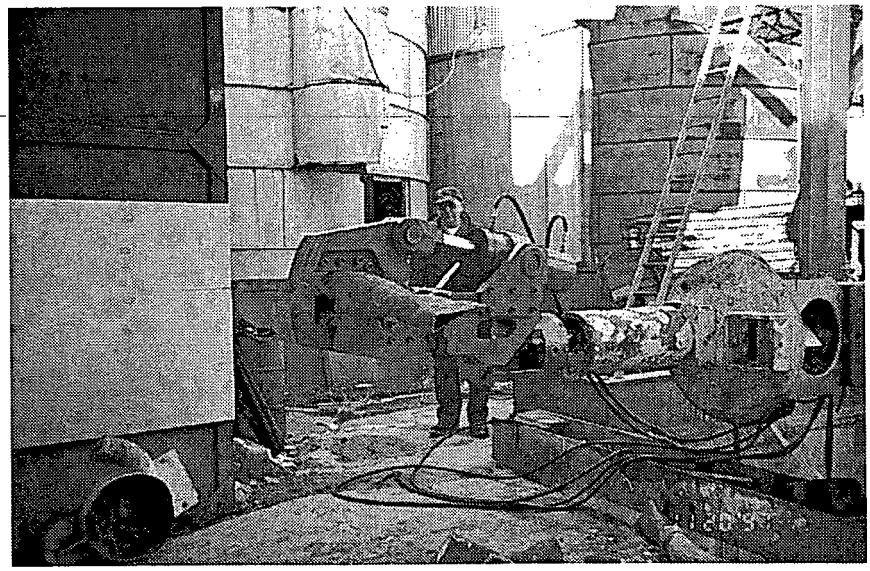
Fernald construction subcontractors have not had a lost-time work accident at Fernald since Fluor Daniel began operations at the site in December 1992. This achievement totals more than 2.25 million safe work hours. "The record is a tribute to the people who do the work," said Jerry Monahan, executive secretary of the Greater Cincinnati Building and Construction Trades Council, whose members have contributed the majority of the safe work hours.

Lou Doll, the Building Trades' site representative, credits strong training and apprenticeship programs for the safe work record. "Many of our people have worked at Fernald for a long time," he said. "We all benefit from their knowledge of the plant and the safety culture they have attained." Doll also said daily safety meetings, where workers receive their assignments for the day, are beneficial. "It's a good check to make sure we're all on the same page and thinking about safety."

Fernald Transfers Technologies to Other DOE Sites

In October, DOE sponsored another technology transfer/cross fertilization meeting at the Savannah River Site.

Fernald's Technology Programs personnel arranged to provide officials at Savannah River with two Personal Ice Cooling Systems plus training on their use. Also attending were representatives from EagleTech, a specialty equipment manufacturing company, who gave a presentation on a Mobile Work Platform, slated to be demonstrated at Fernald in early 1998. The Mobile Work Platform will hold, cut and remove piping from elevated locations and it has potential for a number of applications at other DOE sites.



Above: The shear/crimper end effector to be employed on the Mobile Work Platform is demonstrated for Fernald engineers at EagleTech's testing facility near Cleveland, Ohio (6770-9).

Haul Road and OSDF Meet Milestones Ahead of Schedule

Completion in December of the Haul Road and the first placement of impacted material into the On-Site Disposal Facility (OSDF) fulfilled two EPA enforceable milestones that were scheduled to be completed in March 1998.

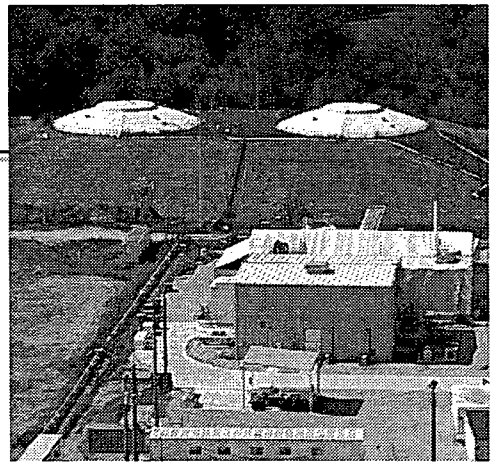
The OSDF Haul Road was completed on Dec. 5, 1997. This 1,650 ft. road will be used to carry impacted material from the Southern Waste Units to the OSDF for disposal.

The placement of impacted material from the East Stockpile into Cell 1 of the OSDF began on Dec. 23, 1997. As of Dec. 31, 1997, a one-foot thick covering of this material had been placed in the Cell.

Above: Workers completing final portion of Haul Road. #6319-836

Left: On hand for the first placement of impacted material in the OSDF are l to r: Donna Bohannon, OEPA; Tom Schneider, OEPA; Mike Hickey, Fluor Daniel Fernald; Jay Jalovec, DOE. (6319-1025)

Accelerated Waste Retrieval Important to Silos Project



Left: Silos 1 & 2 contain low-level radioactive wastes dating back to the 1950's (6718-36)

Treating the waste found in Silos 1 and 2 tends to draw attention, however removing the waste from the silos will also be a significant challenge. According to Silos Project Manager Don Paine, "Things like plastic bags, wood, glass, even hardhats could be mixed in with the waste. We will need to be able pull out that material and the waste too. It won't be easy, plus we need to control the radon."

The structural integrity of the silos has long been an issue to Fernald engineers and stakeholders. DOE agreed with a plan drafted early last September to remove the clay-like waste from the silos and place it into transfer tanks. By accelerating this phase of the project, it's expected to reduce the risk associated with storage in the current silos. Ohio EPA, local stakeholders and an outside/independent review team have reviewed the plan and agree.

Paine expects that 10 or so tanks will be needed to house the waste once it's removed from the silos. The tanks will likely be made of steel with secondary containment. Contractors will be working on proposals for retrieval and storage with bids due back in late FY 98. Once a vendor is selected the design period and construction will begin. Mockup testing is expected to take place in mid FY01, with actual removal of material to transfer tanks the following year.

Safe Shutdown getting the job done

Safe shutdown of Fernald's nuclear facilities was originally scheduled to take between 20 and 25 years to complete and cost taxpayers approximately $100 million. In a concerted effort to reduce project costs and compress the remediation schedule without compromising safety, Safe Shutdown personnel, working closely with Department of Energy, Health and Safety and Radiological Control representatives, began looking for innovative ways to improve their work processes.

Above: Isolating all utilities is one of many activities Safe Shutdown personnel perform when preparing a building for dismantlement (6401-162).

Together, this cross-functional team developed a plan that would dramatically increase the efficiency of the entire Safe Shutdown process while decreasing the length and cost of the program. "We developed three basic principles to govern our operations," said Safe Shutdown team coach Monty Morris. "Those principles are work evolution control, building segmentation and enhanced detailed planning." The concepts are relatively simple: minimize intrusive work to the greatest extent possible; segment the building so that any necessary intrusive work can be accomplished with little or no impact on other activities; and involve team members from all disciplines when planning work.

Safe Shutdown is complete in Plants 9, 5 and the Pilot Plant, with work continuing in Plants 2/3, 6 and 8.

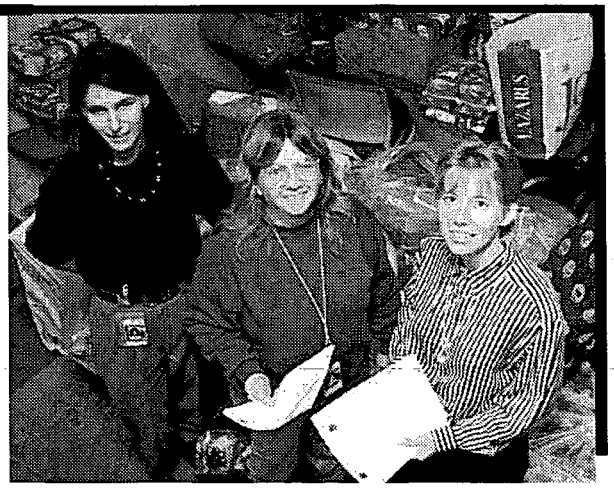
Their efforts began to pay sizeable dividends almost immediately. "We pulled the concepts together while working in the Pilot Plant and were ready to roll when we entered Plant 5," Morris said. "Using these techniques, we completed operations in Plant 5 two and a half months ahead of schedule and $1.2 million under budget."

Safe Shutdown is complete in Plants 9, 5 and the Pilot Plant, with work continuing in Plants 2/3, 6 and 8. Due in large part to the success it has achieved in Fernald's nuclear facilities, Safe Shutdown's scope has been expanded to include removing salvageable equipment and disconnecting utilities in non-nuclear facilities, as well. "We're very pleased with the results we're getting," Morris said. "It's nice to see what can be accomplished when the whole team is working together toward a common goal."

Making Wishes Come True

For the third year, Fernald team members have brought joy to hundreds of area children by purchasing Christmas presents. "Wish Trees" were decorated with paper ornaments containing gift suggestions, which were then purchased, wrapped and delivered throughout the community. Keeping with the holiday spirit, children from Ross, Southwest, Mt. Healthy, Hamilton and Cincinnati school districts were included in this year's celebration.

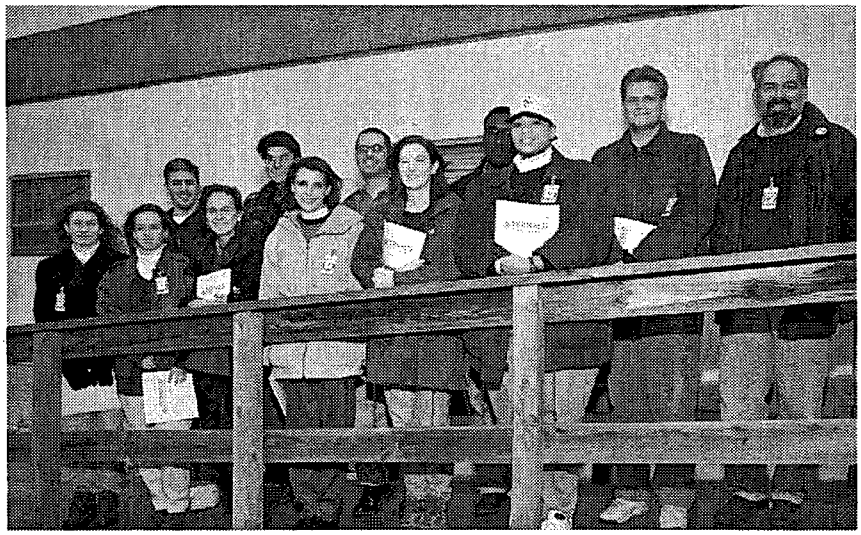
Right: Fernald team members including Katie Payne, Rita Claxton, and Alissa Powers helped sort and deliver three truckloads of gifts for area families. (6792-1)



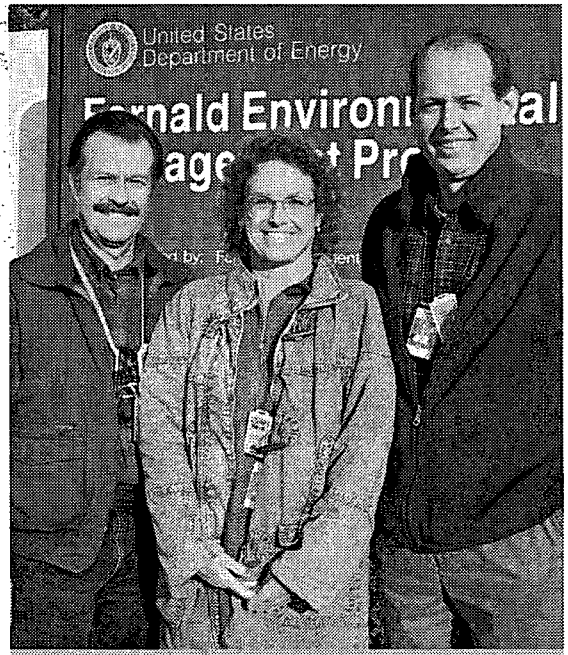
Recent Tours

Rob Portman, U.S. Representative from Ohio's 2nd District, toured the Fernald site on Dec. 3, 1997. Accompanying him were his press coordinator, Brian Besanceney; Edwa Yocum, local resident and member of the Fernald Residents for Environmental Safety and Health; and John Applegate, Chair of the Fernald's Citizens Advisory Board.

Left: From l to r: Glenn Griffiths, DOE Deputy Director; Yocum; Applegate; Portman; Bob Heck, Fluor Daniel Vice-President; and Johnny Reising, DOE Associate Director for Environmental Management. (6779-1)



Above: Fernald Citizens Advisory Board Chairman, John Applegate (far right) takes his environmental law class from the University of Cincinnati on a tour. (6784-1)



DOE Ohio Field Office Manager, Leah Dever, plans to make regular visits to the five sites she oversees, one of which is Fernald.

Above l to r: Johnny Reising, Associate Director for Environmental Management; Ms. Dever; and, Jack Craig, DOE- Fernald Site Director. (6794-3)

New Information Available to Stakeholders at PEIC

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

- Substantive Wetland Permitting Cross-Walk for Air Monitoring Access Road Construction
- Transmittal of the Final Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Treatment Project
- Ohio Environmental Protection Agency on the Impacted Materials Placement Plan
- Transcript of Fernald Cleanup Progress Briefing/Silos Project Public Hearing Held on Nov. 25, 1997

fernald waste

Shipping Report

The volume, in cubic feet (cf), of low-level waste shipped to the Nevada Test Site (NTS) for December 1997 was 11,063 (external). As of January 2, 1998, Fernald has shipped 12,423 cf (external) of low-level waste to the NTS for Fiscal Year FY 1998.

Low-level waste volume reduction includes approximately 800 containers of legacy low-level uranium residue and 1,750 containers of sump cake from Plant 8 filter operations. These materials were overpacked, staged, and released for shipment in December 1997. However, during the week of December 8, several boxes within the shipments experienced hair-line cracks on the bottom of the container near the center runner. One shipment was held in Kingman, Ariz., repackaged and sent back to the Fernald site. DOE-FN has received formal notification from DOE-HQ to discontinue all shipments to the NTS pending an investigation.

Efforts for FY 1998 will be directed towards reduction of legacy uranium residue and asbestos inventories; as well as the removal of a majority of the thorium materials that are currently being staged in Building 65.

The volume of low-level waste materials shipped to NTS in December 1997 per waste stream was:

Waste Stream	***External Volume (cf)***
Process Area Scrap	*0*
Thorium	*0*
Residues (incl. Plant 8 Sumpcake)	*11,063*
Contaminated Trash	*0*
Construction	*0*

The volume of low-level waste materials shipped to NTS in FY 1998 (as of January 2, 1998) per waste stream was:

Waste Stream	***External Volume (cf)***
Process Area Scrap	*1,360*
Thorium	*0*
Residues (incl. Plant 8 Sumpcake)	*11,063*
Contaminated Trash	*0*
Construction	*0*

Fernald Report
U.S. Department of Energy
Fernald Environmental Management Project
P.O. Box 538705
Cincinnati, OH 45253-8705

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**

Rayer, Diane MS78

12