

fernauld
Report

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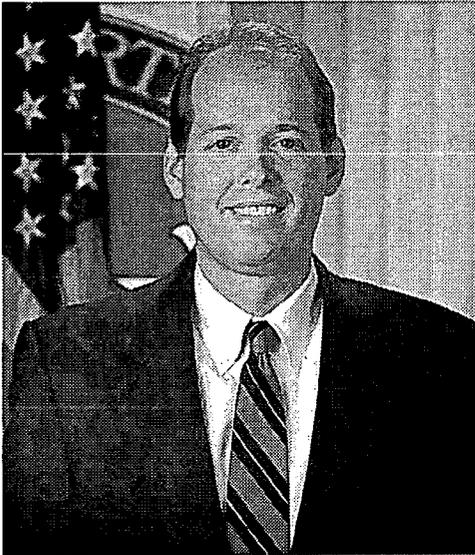
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December 1997



Fernald Uses "Balanced Approach" in Waste Shipping & Disposal

This month marked a significant event in Fernald's history when 30,000 cubic yards of soil were safely placed in our On-Site Disposal Facility (OSDF). This waste, the first to be placed in the cell, came from the east field during OSDF excavation. This achievement was the result of input and direction from stakeholders, regulators, and our con-



tractor. I congratulate this team of close to 200 individuals for getting us to where we are today. But while placing our first waste in the disposal facility is important, I would be remiss if I didn't reflect on what it means in terms of how we achieve our mission. DOE is committed to a "balanced approach" when it comes to the shipment and disposal of Fernald waste. The Fernald Citizens Advisory Board, formerly known as Fernald Citizens Task Force, wrestled with this key issue more than two years ago and in July 1995 recommended the "balanced approach" in light of safety and budget considerations. The plan calls for the packaging and shipment of Fernald's most highly contaminated and radioactive materials off site. To date, over 220,000 cubic yards of waste has been shipped to the Nevada Test Site and Envirocare. The waste that has been disposed of off site includes residues from processing, thorium, and process area scrap.

The remaining waste which will be placed in the OSDF is low-level radioactive material like soil, flyash and building scrap. This will account for approximately 80 percent of the total waste generated during the site cleanup.

The "balanced approach" is a fair way to handle the sensitive issue of waste disposal. It addresses the concerns of stakeholders not only at Fernald but also in Nevada and Utah, who don't want to be solely responsible for the waste burden. By implementing this plan, we have the real work of cleaning up this former production site in our grasp.


Jack Craig
Director, DOE-Fernald

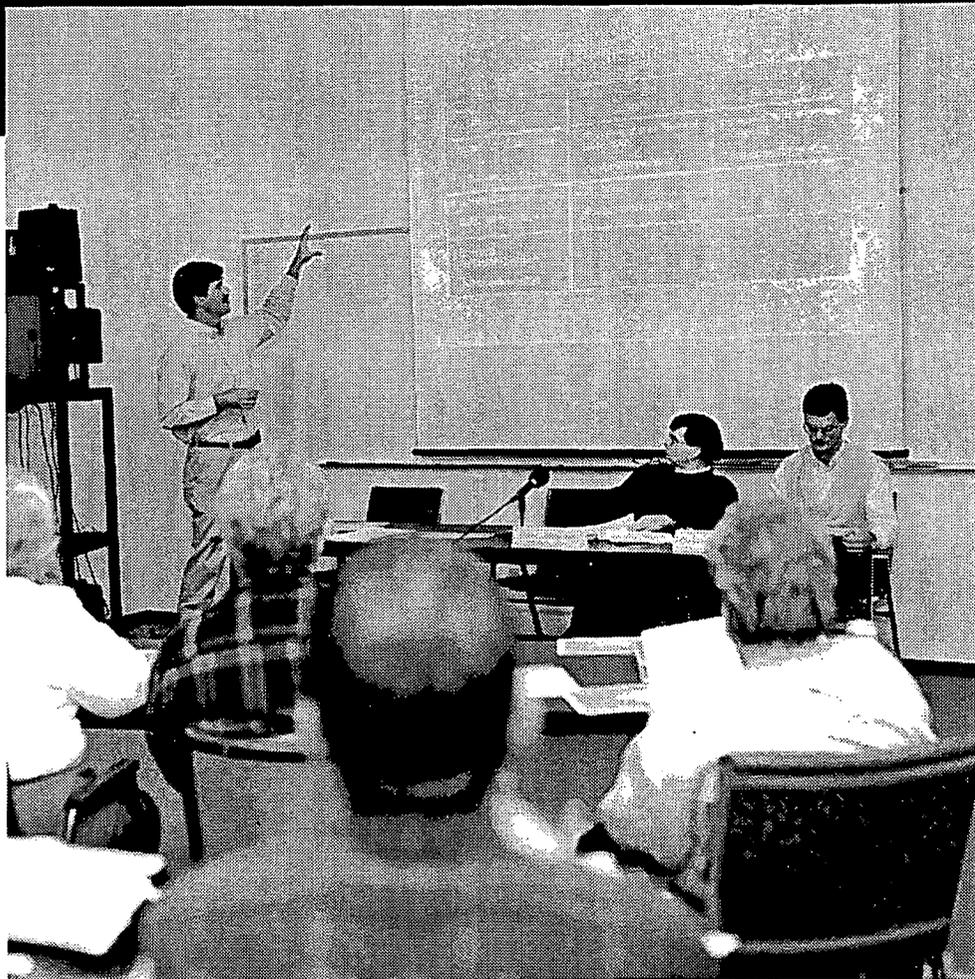
On the Cover: The On-Site Disposal Facility (OSDF) Team gets ready to meet a major milestone with first waste placement scheduled for this month. (6319-964)

Fernald Silos Project Path Forward

Stakeholders were recently asked to review and provide comments to DOE on the draft Silo 3 Request for Proposal (RFP) and the Draft Silo 3 Explanation of Significant Differences (ESD). Both documents outline the plan to move toward the remediation of Silo 3. DOE will consider all public comments received on both documents in preparation of the Final Silo 3 RFP and ESD.

The overall objective of remediating Silo 3 is to safely retrieve, treat, and dispose of the Silo 3 contents off site using the most efficient alternative. Both the Draft Silo 3 RFP and Draft Silo 3 ESD documents are available at DOE's Public Environmental Information Center (PEIC) located at 10995 Hamilton-Cleves Highway, 513-648-7480.

Questions about the Silos Project path forward should be directed to Gary Stegner, DOE Public Affairs, 513-648-3153.



Public involvement will continue to be an essential component of the Silos Project path forward. Fernald management and interested stakeholders are pictured above discussing details about the remediation of Silo 3 at the Nov. 25 Silos Project public hearing. (6687-36)

New Manager Appointed to DOE Ohio Field Office

Ms. Leah Dever has been appointed manager of the U.S. Department of Energy's Ohio Field Office as of November 12. Dever is responsible for closure and environmental restoration of five nuclear facilities including Fernald, Mound, Ashtabula, and Columbus, in Ohio, and the West Valley Demonstration Project in New York. Dever replaces Phil Hamric who retired in March 1997. Robert Folker, deputy manager of the Ohio Field Office had served as acting manager during this transition.

Ms. Dever's previous assignment was as assistant manager for Environmental Management at the Nevada Operations Office, where she managed groundwater contamination, soil contamination, and industrial site cleanup of the Nevada Test Site. Dever began her Federal career as an environmental scientist at DOE-Headquarters. There she assisted the Department's Operations Offices at Albuquerque, Idaho, Nevada, Oak Ridge, Richland, Rocky Flats and Oakland through the difficult process of bringing their facilities into compliance with current environmental law and practice.

Cleanup **Progress** Update

Operable Unit 1

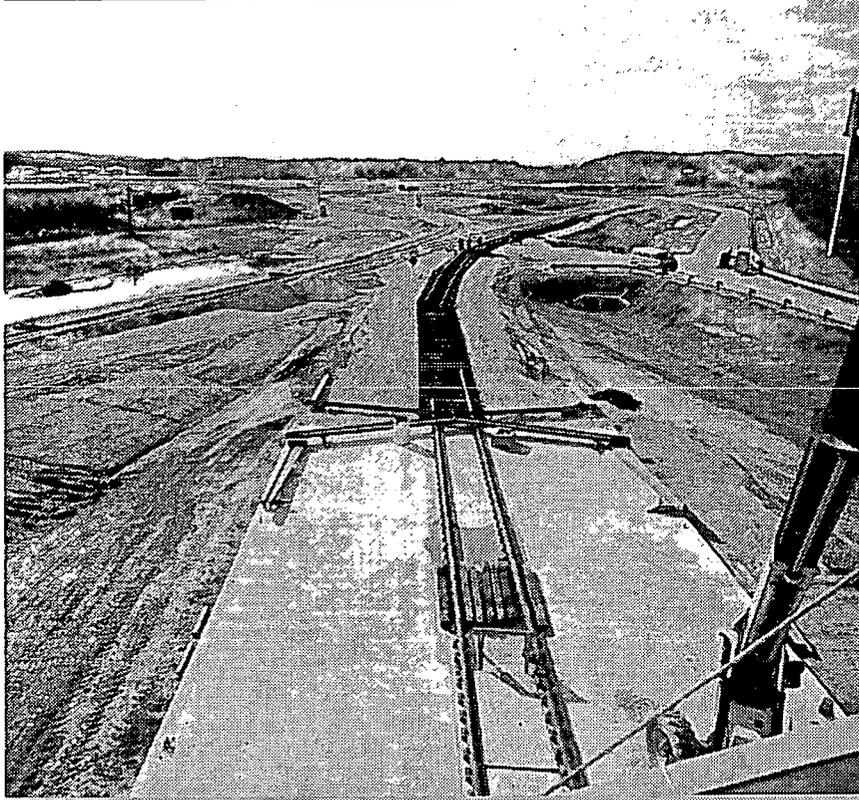
Waste Pits Remedial Action Project (WPRAP)

- Completed Paddy's Run trestle upgrade
- Continued on-site rail infrastructure construction
- Mobilized locomotive maintenance building erection subcontractor; began construction
- Began implementing pre-mobilization deliverables for Alternative Remedial Action Subcontracting Approach (ARASA) subcontract

Operable Unit 2

On-Site Disposal Facility (OSDF)

- Completed installation of OSDF Cell 1 secondary composite liner and leak detection system; initiated installation of primary composite liner
- Worked on Leachate Conveyance System construction punchlist items; also began preparation for Integrated Construction Acceptance Testing and Systems Operability Testing
- Finished asphalt paving, shoulder work, and painting on Haul Road



Above: Locomotives purchased for shuttling site rail cars will be serviced in a climate controlled building. (6349-1210)

Right: The day starts early for Don Goetz a FDF construction engineer, and the rest of the OSDF team. (6319-885)

Far Right: Destructive peel or shear testing being performed on a welded seam of HDPE liner. (6319-783A)



Operable Unit 3

Facilities Closure & Demolition Project (FC&DP)

Safe Shutdown

- Completed holdup material removal in selected areas of Plant 8
- Completed energy isolation procedures and excavated domestic waterline for Building 78

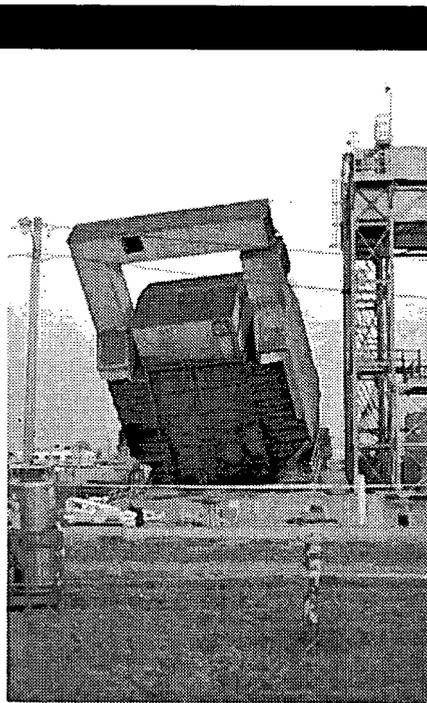
Decontamination & Dismantlement (D&D)

- Boiler Plant/Water Plant —
- Continued asbestos abatement/removal activities
- Completed demolition of Fly Ash Silo, Electrostatic Precipitators, and Clearwell Building; initiated demolition of railroad tracks
- Thorium/Plant 9 Complex —
- Continued mobilization activities, including installation of fencing and set-up of staging areas for containers
- Proceeded with preparation/submittal of Safe Work Plans
- Initiated demolition of railroad tracks

Operable Unit 4

Silos Project

- Began preparation of Initial Screening of Alternatives for treatment of Silos 1 and 2
- Prepared initial draft of Request for Proposal (RFP) for Silos 1 and 2 Multi-Tech Proof-of-Principle Testing
- Received U.S. EPA approval of Draft Silo 3 Explanation of Significant Differences (ESD); issued Draft Final ESD for public comment 11/17/97 and held public hearing 11/25/97
- Issued Draft RFP for Silo 3 Project for review/comment by regulators, stakeholders, and potential subcontractors
- Briefed stakeholders on radon emissions as well as the concept for the Accelerated Waste Retrieval/Transfer Tank Area/Radon Control System Project at monthly meeting of Fernald Residents for Environment, Safety and Health (FRESH)



Left: A few strategic cuts and a little pull from an earth mover brought the west precipitator quickly to the ground (6407-321)

Below: As part of the waste retrieval mockup on Silo 4, workers prepare the area to pour a concrete slab. (6759-12)



Cleanup **Progress** Update

Operable Unit 5

Aquifer Restoration & Waste Water Project

- Relocated Bionitrification/Effluent Treatment System to new Sewage Treatment Plant (STP); also completed design of new STP piping and issued contractor bidding package
- Completed drilling of monitoring wells for Injection Demonstration System
- Continued drilling of extraction wells for South Plume Optimization Project
- Continued construction activities associated with Advanced Wastewater Treatment (AWWT) facility expansion and AWWT Ion Exchange Regeneration System

Operable Unit 5

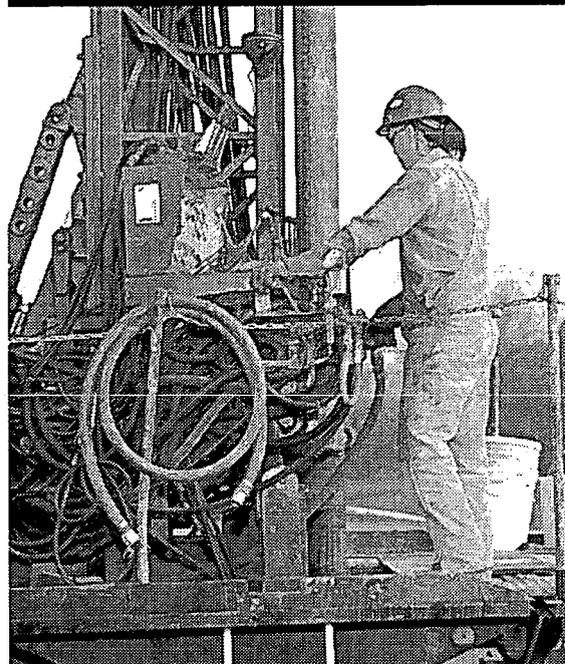
Soils Characterization & Excavation Project

- Continued weekly inspections of embankment erosion area along Paddy's Run channel; completed evaluation of alternatives for embankment stabilization, and presented conceptual design of recommended alternative to regulators
- Submitted Prefinal Area 1 Phase II (Southern Half of East Field) Integrated Remedial Design Package (IRDP) to regulators; package contains implementation plans, design drawings, technical specifications, and any other supporting documents needed to conduct soil remediation in Area 1 Phase II
- Completed various field implementation activities for Area 2 Phase I (Southern Waste Units) Site Prep package, including grading and graveling of support area, installation of geotextile material under stockpile areas, and clearing/grubbing for retention basins

Right: A total of nine, 2-inch diameter monitoring wells were placed near injection wells in order to monitor particle flow.

Here a roto sonic drilling rig is being used near Willey Road. (6261-213)

Below: Rain water runoff from the Southern Waste Unit project will be collected in retention basins and pumped to the Advanced Waste Water Treatment facility. (6734-186)



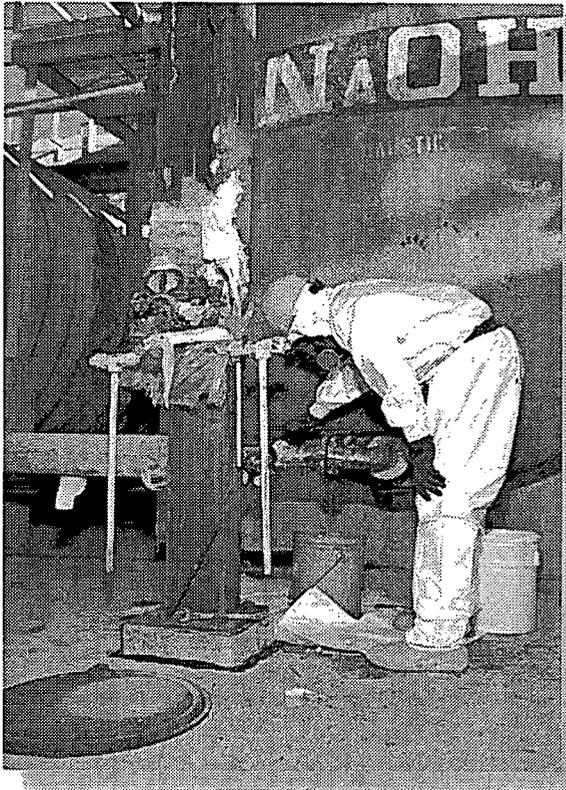
Waste Management Nuclear Materials Disposition Projects

- Organic Extraction Project (RCI/Terra-Kleen)
— Completed demonstration phase and received analytical results; began evaluation of subcontractor's report and recommendations
- Thorium Legacy Waste Stabilization Project —
Submitted Final Technology Work Plan to DOE-Fernald; continued ongoing characterization of legacy waste inventory
- Nuclear Material Disposition Operations —
Completed repackaging of depleted materials from Plant 6 Annex; 1,050 cans containing enriched unrestricted materials repackaged into 35 white metal boxes
- Continued construction activities associated with the T-Hopper Project, which will eventually entail repackaging of low enriched materials from T-Hopper containers into 55-gallon drums

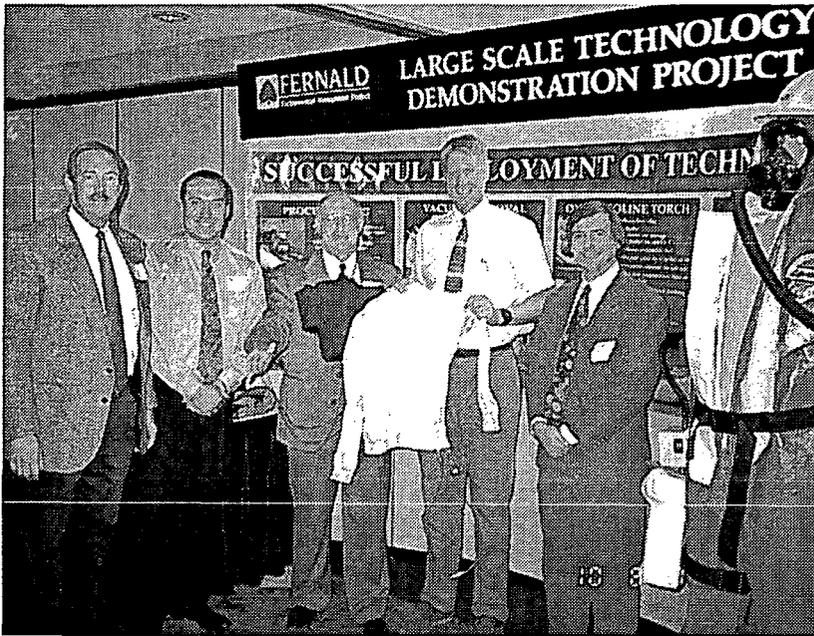


Above: Norman Reinker, a radiological control technician, labels waste samples from an organic extraction vessel. (6444-166)

Below: Once the holes are cleared, electric poles will be installed to support the Aquifer Restoration Project. (6261-269)



Left: A Fernald team member makes a first line break in piping as part of the project to remove caustic solutions stored near Plant 8. (6681-33)



Fernald's Technology Programs Participates in Hanford's Technology Transfer/Open House

On October 8, an open house was held in Hanford to showcase innovative D&D technologies to potential contractors. In an effort to share the benefits of technologies demonstrated at Fernald as part of the Office of Science and Technology's Large Scale Technology Demonstration program, Fluor Daniel Fernald, working with DOE officials at Hanford and Savannah River, were able to organize technology transfers of the Personal Ice Cooling System (PICS) and the oxy-gas torch. Representatives of DELTA TEMAX and GEOMET Technologies (manufacturer and integrator of the PICS) were also present to support the Fernald display and to provide training to Hanford personnel who received the PICS.

From left: Fernald's Mark Peters, and Marty Prochaska, DOE-Hanford's Jim Goodenough, Bechtel Hanford's Steve Pulsford, and GEOMET Technologies Jack Sawicki. (6429-426)

The Thanksgiving Spirit Stretches from Fernald to Oklahoma

For the third straight year the Ohio Field Office and the Fernald Environmental Management Project sponsored an assistance program supplying food and clothing to the Loyal Shawnee of Oklahoma.

"The assistance we received by this effort last year allowed some members of the Shawnee to have the best Christmas ever," said Don Greenfeather, Tribal Chairman.

The Loyal Shawnee were the last Shawnee people moved out of Ohio by the United States military in the 1830's. They were moved to a one-million-acre area in Kansas. In 1869, they were no longer considered an Indian "nation" and they were moved to a small area in northeast Oklahoma managed by the Cherokee Nation and the United States government.

"I am sorry that it's taken over 200 years to give something back to the American Indian people," said Joe Schomaker, Fluor Daniel Fernald manager of Cultural Resources. "They are in desperate need of help and this is just a small way of helping out."

Donations of food, clothing and toys provided by DOE, Fluor Daniel Fernald & other organizations were shipped to Oklahoma in November. Over \$3,300 worth of food was donated by one local supplier. Landstar Ranger, volunteered a tractor trailer truck and a driver to make the trip.



Fernald and Ohio Field Office employees helped load approximately \$10,000 worth of donations. Here Carolyn Roehrig (left) and Theresa Fort (right) help package some much needed supplies. (6763-19)

Recent Tours



Pictured kneeling - Wilma Brickner and Milt Holstein; standing - Rudy Crawford, Lucy Rathgens, George Basset, John Madoffori and James Batdorf.

Several Fernald retirees assisted with the United Way Campaign on October 23. They completed the day with a tour of the site. Needless to say, they were amazed at the changes that have been made over the last couple of years, especially the takedown of Plants 1 and 4.



For the Year-End Review, DOE-HQ toured the site and made a stop at the On-Site Disposal Facility (OSDF).

Johnny Reising, DOE Associate Director, shows Bill Murphie, DOE-HQ how the liner will be installed at the OSDF. In foreground from left to right, Bob Heck, Dennis Carr, John Bradburne. (6319-955)

New Documents Added to the Public Environmental Information Center

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):

- Revised On-Site Disposal Facility Impacted Materials Placement Plan (Revision 1) - The most significant revision to this document is the deletion of placement and compaction procedures for oversized material and over length steel. In addition, the specialized placement plan No. 1, Oversized Metals and Overlengths Structural Steel Beams/Columns has been canceled. A number of other clarifications have been made to the Impacted Materials Placement Plan as a result of OEPA comments.
- Draft Silo 3 Waste Project Request for Proposal (RFP), Revision D - This is a draft of the RFP for Silo 3 being provided for review and comment to the U.S. and Ohio Environmental Protection Agencies.
- OU4 Dispute Response to Public Comments - This letter contains the public comments received on the Dispute Resolution and DOE responses to comments. This letter also contains direction from U.S. EPA that no changes need to be made to the Resolution based on the public comments received.
- Integrated Remedial Design Package for Area 2, Phase 1 - The purpose of this transmittal is provide regulator review and approval of the Draft Integrated Remedial Design Package for the Southern Waste Units at Fernald.
- Draft Silo 3 Explanation of Significant Differences for Operable Unit 4 - This document outlines the current proposed plan for the remediation of Silo 3.



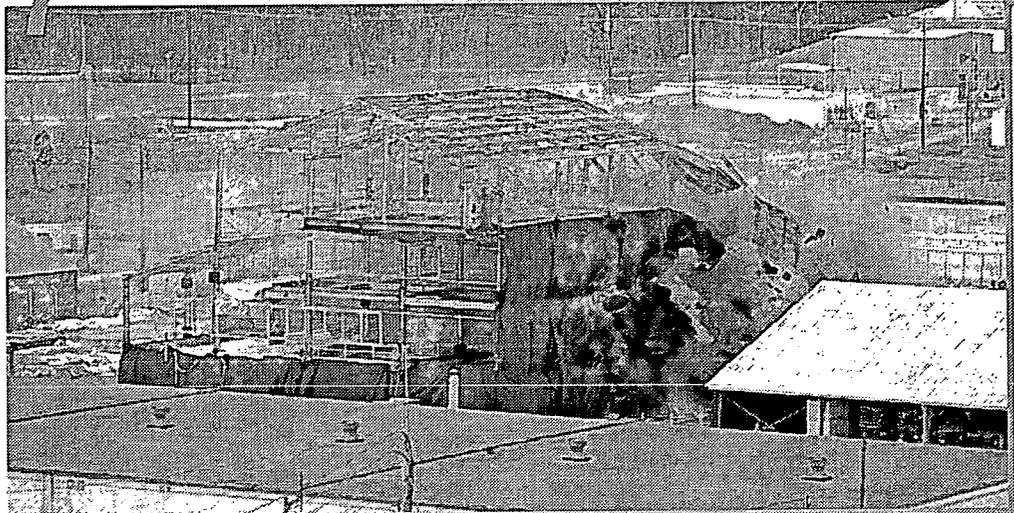
Members of the Ohio Site Technology Coordination Group visited Fernald for a meeting with our Technology Programs Division. Presentations were given on selected technologies that have been initiated at Fernald, like organic extraction of mixed wastes and aquifer reinjection.

Touring the site were: Marv Gross, Fluor Daniel Fernald Technology Programs; Herman Moore, DOE-West Valley; Don Herman, Consultant; James Griffin, BDM supporting DOE Columbus Environmental Management Project; and Doug Maynor, DOE-Ohio Field Office. (6750-2)

Highlights

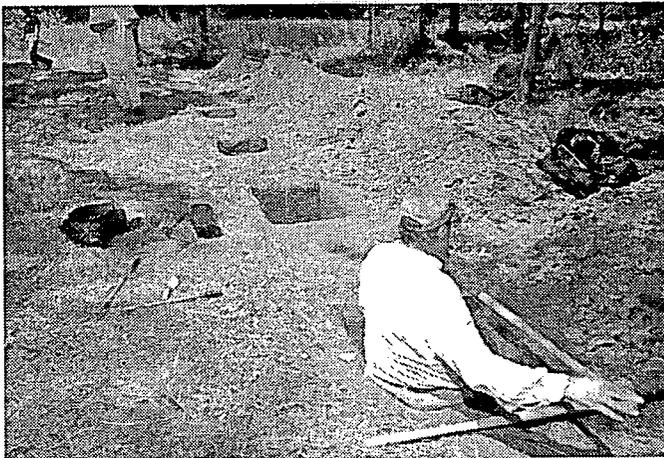
1997

In February of this year Plant 1 became the third major structure to be imploded at Fernald.



PLANT 1 IMPLOSION

Left: Grave chambers being prepared to reflect original burial orientation

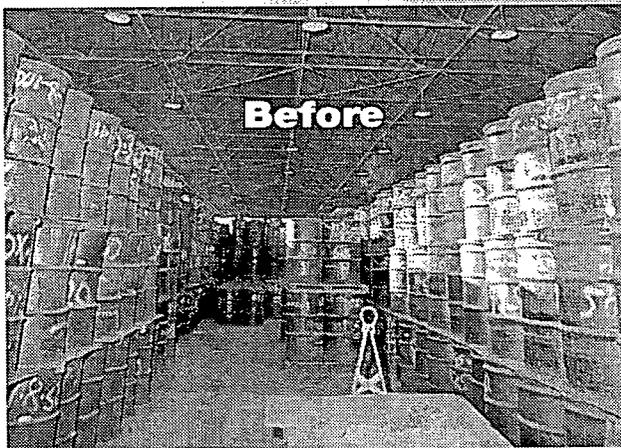


Right: Shawnee tribe members preparing for the reburial ceremony.



NATIVE AMERICAN INTERNMENT

5,600 deteriorated drums of radioactive thorium were safely packaged and shipped to Nevada. This two year project was completed 10 months ahead of schedule and \$400,000 under budget.



THORIUM OVERPACKING PROJECT



C.R.O. GRANT

The Community Reuse Organization is made up of stakeholders who either work at Fernald or live in the area. Their task is to develop strategies that will help offset the loss to the local economy that will result as Fernald completes its cleanup mission.



On Site Disposal Facility

By the time cell 1 in the OSDF is complete, over nine miles of HDPE liner seams will have been fused and checked.



ARASA CONTRACT

Fluor Daniel Fernald and International Technology (IT) Corporation sign off on an eight-year, \$122 million contract to treat Fernald's wasted pits, clear well and burn pit.



GROUNDWATER PUMPING

The use of injection wells is expected to dramatically speed up the rate at which we are treating the aquifer. Here concrete is being poured over supply and discharge lines in order to avoid undermining and erosion of the pipe bed.

ferald waste **Shipping Report**

As of November 28, 1997, Fernald has shipped 1,360 cubic feet (external) of low-level waste to the Nevada Test Site (NTS) for Fiscal Year 1998.

Low level waste volume reduction includes approximately 800 containers of legacy low-level uranium residue and 1,500 containers of sump cake. These materials have been overpacked and staged for shipment in December 1997, since DOE has received formal notification that the suspension on uranium residues has been lifted.

Efforts for Fiscal Year 1998 will be directed towards complete reduction of legacy uranium residue and asbestos inventories: as well as a majority of the thorium materials.

The volume of low level waste materials shipped to NTS in November 1997 per waste stream is:

<i>Waste Stream</i>	<i>External Volume (cf)</i>
<i>Process Area Scrap</i>	1,360
<i>Thorium</i>	0
<i>Residues</i>	0
<i>Contaminated Trash</i>	0
<i>Construction</i>	0



Fernald Report

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