

fernald
Report

3554

Inside

- Year in review
- 24-hour safety=
more than 6.9
million safe work
hours
- Closure contract
signed

Jan / Feb 2001



Fernald earns its STAR

I am pleased to announce that the Fernald Environmental Management Project received STAR status from the Department of Energy Voluntary Protection Program (DOE-VPP). This means we are recognized for not only having a good safety program, but for having a safety program which is embraced and practiced by all members of our workforce. I congratulate everyone at this site for their resolve in area of safety.

Obviously Joseph E. Fitzgerald, Deputy Assistant Secretary DOE Office of Safety and Health, shares this view.

In a letter to Fluor Fernald announcing the decision he stated that:

"Your commitment to safety and health excellence has been demonstrated in many ways. I have observed that there is a strong commitment from all levels of Fernald Environmental Management Project personnel, from the workers to top management, to support your stated goal of "Safety First" as a reality. Fernald has established such a strong safety culture that both management and employees clearly share the belief that all employees of the site are both responsible and accountable for safety and health in the workplace. In the course of our deliberations on your application, which culminated in an onsite visit (October 23-27, 2000), we witnessed a very high-quality health and safety program. Accordingly, your site is approved for entrance into the DOE-VPP program as a STAR level organization."

It is clear from Mr. Fitzgerald's letter that this award was not the result of a slick presentation or merely reaching a certain amount of safe work hours. This award reflects the attitude and actions of our workforce seven days a week, 365 days a year.

I have not been here long enough to enjoy any of the credit for winning this award, but I have certainly been here long enough to know that you earned it.

Achieving VPP STAR status is quite an honor. Achieving it on the first try is even more of an honor. You can count the number of DOE STAR sites on both hands. You can count the ones that reached this level on their first try on one hand. It is a tremendous accomplishment. I am proud to be associated with a project that not only excels in performance, but can also back it up with an unwavering commitment to safety.



Steve McCracken
Director, DOE-Fernald

On the cover: A heavy equipment operator prepares to place waste pit material in the drier feed hopper (6944-d1373).

2000 the year in review



Waste Pits Project

- Shipped approximately 98,000 tons of material via 15 unit trains to Envirocare of Utah, Inc.
- Excavated approximately 30 percent of the contents in Pits 1 and 3

Soil and Disposal Facility Project

- Reached 100 percent capacity in Cell 1 of the On-Site Disposal Facility
- Certified 15 percent of the site as having attained approved cleanup levels (bringing total certified area to 42 percent)
- Completed restoration of a 20-acre tract located at the northwestern corner of the site
- Completed excavation of the Southern Waste Units to designed grade

Decontamination and Dismantlement

- Successfully demolished the former Inspector General/Industrial Relations and Security Buildings, the first administrative area buildings to be demolished
- Completed removal of the Nuclear Fuel Services storage tanks used in the UNH project
- Continued demolition of Plant 5 – 79.9% complete
- Continued demolition of Plant 6 – 44.5% complete
- Dismantled 13 additional structures, for a total of 90 of the more than 250 structures identified for demolition since 1994

Above left: One last look at Building 28B, the former Inspector General/Industrial Relations Building prior to final demolition. This was the first building to be demolished on the administrative side of the Fernald site (7379-d0147).

The year 2000 is likely to be remembered as the year that the Department of Energy awarded a contract specifically designed to lead the site to closure. However, the excitement of a new contract should not obscure the day-to-day accomplishments of Fernald employees in the field. Dramatic visual changes continue to occur in the profile of the site – that fact is obvious to anyone who has recently seen the large concrete pad where the site turnstiles used to be. There are many other changes as well, some not so obvious, all of them pointing toward safe, efficient, cost-effective and timely remediation and restoration of the Fernald site.

Listed here are some of the outstanding accomplishments of the past 12 months, outlined by project. Note that the numerical totals for Aquifer Restoration and Waste Generator Services represent fiscal year 2000 totals; all other accomplishments are reported by calendar year.

Silos Project

- Received USEPA approval of the amended Record of Decision for Silos 1 and 2 Project
- Began construction of Silos 1 and 2 Accelerated Waste Retrieval Project components
- Began construction of Silo 3 treatment facility

Aquifer Restoration

- Extracted 1.42 billion net gallons of groundwater from the Great Miami Aquifer (GMA)
- Removed 790 net pounds of uranium from the GMA
- Received approval from regulatory agencies to continue the Groundwater Re-injection Project
- Processed over 2 billion gallons of wastewater/groundwater

Waste Generator Services

- Shipped 130,341 cubic feet of low-level waste to the Nevada Test Site
- Transported 14,947 gallons of liquid mixed waste to the Toxic Substance Control Act Incinerator in Oak Ridge, Tenn.
- Transferred 384,642 net pounds of non-radioactive recyclable materials and 6,486 fluorescent lamps to various vendors for recycling
- Shipped 4.6 million net pounds of nuclear product material to DOE's Portsmouth facility
- Shipped 2,034 cubic feet of hazardous waste to Envirocare of Utah, Inc.
- Repackaged and prepared an additional 256,085 net pounds of nuclear product material for shipment

Below: Silos safety personnel watched as concrete poured from chutes onto the Transfer Tank Area of the Advanced Waste Retrieval Project. The pad will hold four carbon steel tanks, which will hold waste from the silos(7385-d0137).

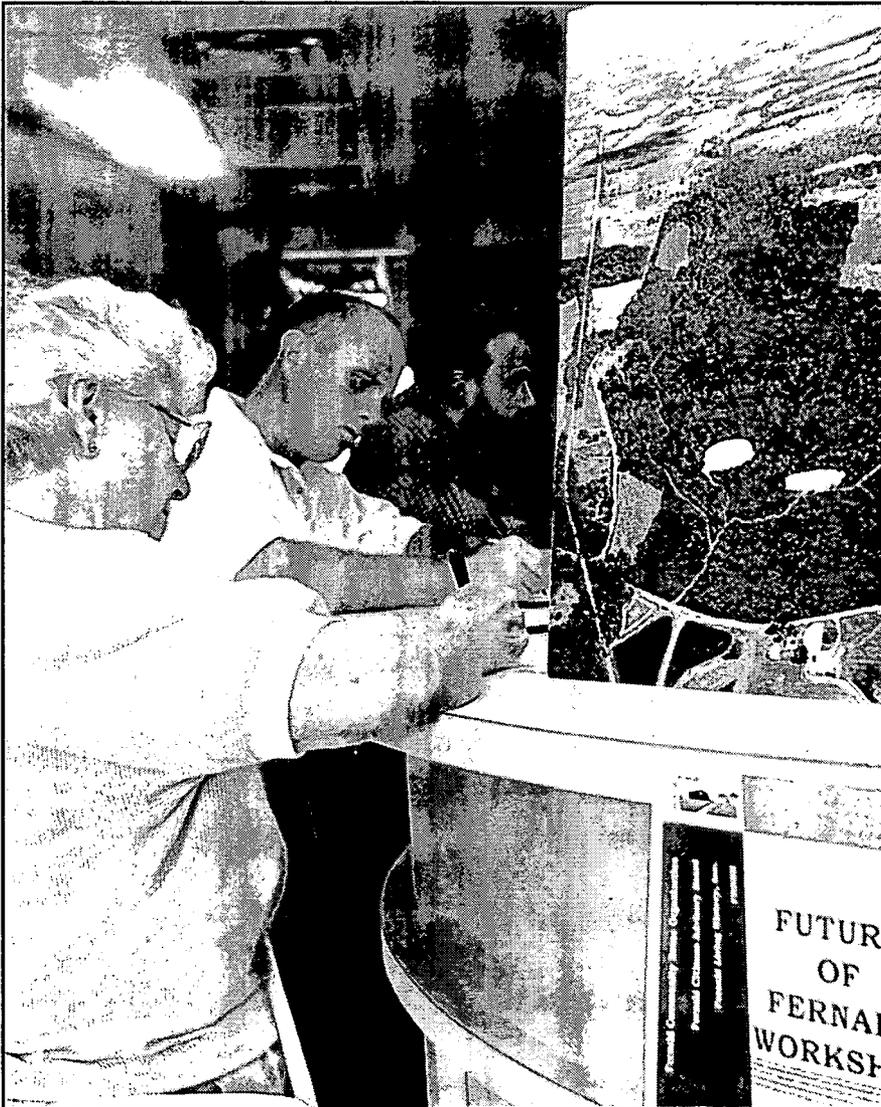


The Fernald Environmental Management Project, along with the Ohio and Oak Ridge Operations Offices, was selected in 2000 by the White House Office of the Federal Environmental Executive to receive one of its annual "Closing the Circle" awards. These awards recognize federal employees and facilities for efforts that significantly benefit the environment. The two field offices, the Fernald site, and a commercial company worked together to develop an innovative recycling alternative for approximately 1,340 tons of contaminated copper wire and windings. By recycling these materials rather than burying them at the Nevada Test Site, Fernald saved over \$1.5 million in disposal costs.

This recycling effort was the subject of several public workshops during 1999 designed to inform and involve the public regarding cleanup efforts at Fernald. As we enter 2001 with a new closure contract, the Fernald site will continue a tradition of openness and collaboration with stakeholders, site workers and regulators focused on safe and efficient remediation and restoration.

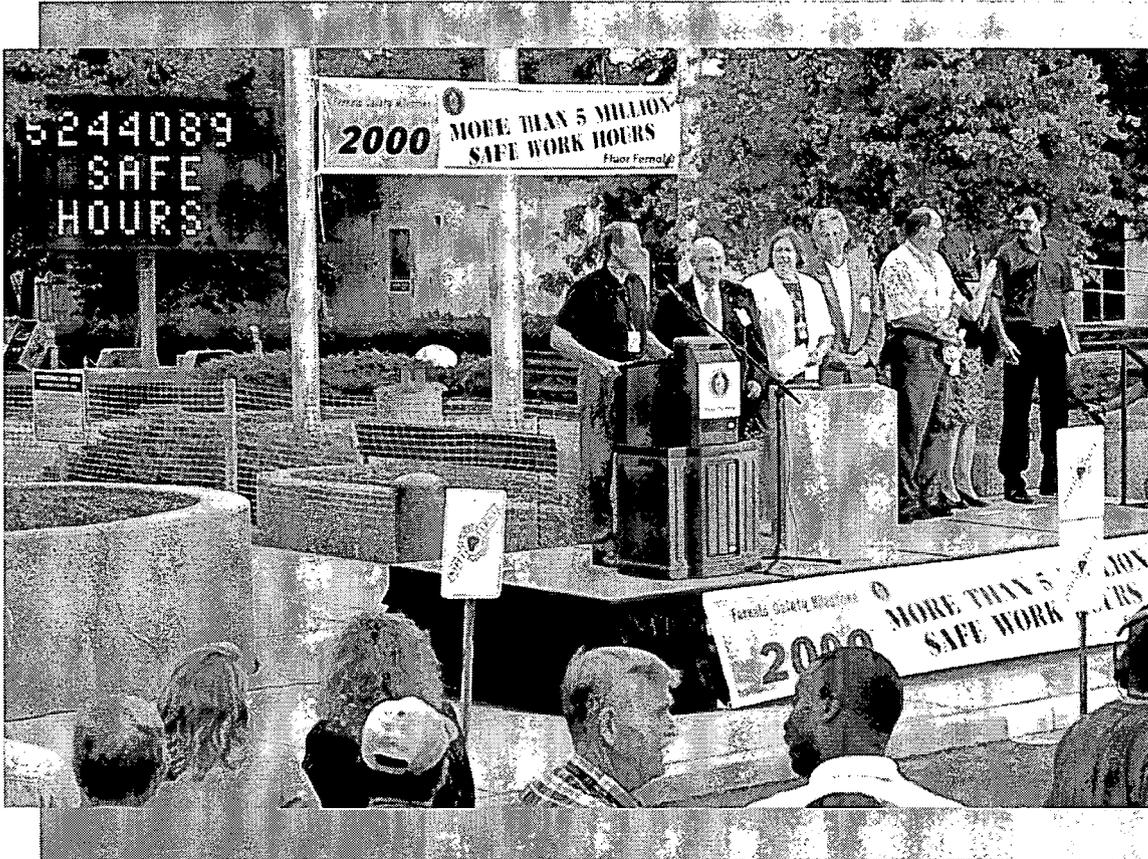
Planned activities for 2001 include:

- Continue excavation of Pits 1 and 3, and begin excavating Pits 2, 4, and 5;
- Ship approximately 91,000 tons of material via 15 unit trains to Envirocare;
- Complete demolition of Plants 5 and 6;
- Complete demolition of five ancillary structures;
- Construct cap over Cell 1 of the On-Site Disposal Facility (OSDF);
- Excavate 70,000 bulk cubic yards of soil;
- Certify an additional 12 percent of site as meeting established cleanup levels;
- Continue construction of the Silo 3 treatment facility and the Silos 1 and 2 Accelerated Waste Retrieval (AWR) tank facility;
- Achieve successful startup of the AWR Radon Control System;
- Receive/evaluate proposals for final Silos 1 and 2 remediation and award contract;
- Extract 1.8 billion gallons from the Great Miami Aquifer;
- Ship 212,000 cubic feet of low-level waste to the Nevada Test Site;
- Kick off the Uranium Waste Disposition Project by beginning characterization of over 6,600 containers of uranium materials that have been declared waste;



Above: Fernald stakeholders registered at the May 24, Future of Fernald Workshop (7391-d05).

- Transport 30,000 gallons of liquid mixed waste to the Toxic Substance Control Act Incinerator in Oak Ridge, Tenn.;
- Ship approximately 1.1 million net pounds of nuclear product material to DOE's Portsmouth facility (total may vary due to Portsmouth screening criteria); and Continue to work with private sector customer to develop shipping/receiving plan for approximately 176,593 net pounds of enriched recyclable metal.



Left: John Meese, President of Metal Trades Department, AFL-CIO, acknowledged that the people responsible for making the 5 million safe work hour celebration happen by coming out every day and making safety the top priority (7437-d0013).

Commitment to safe work

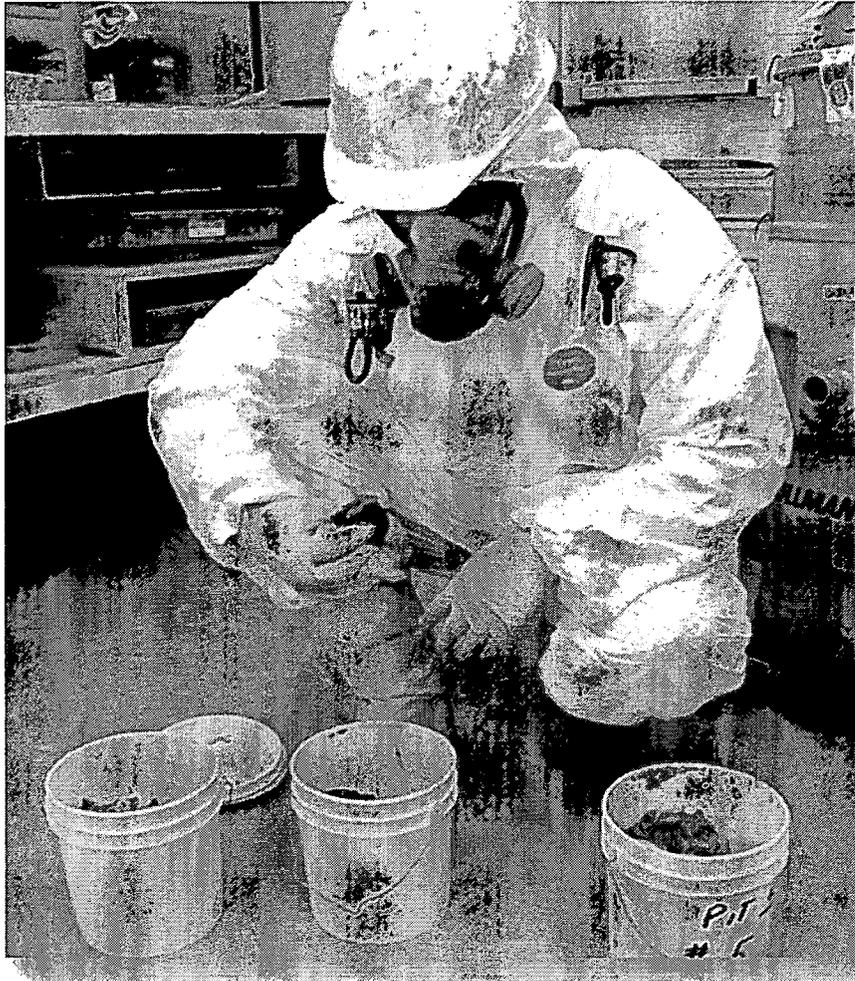
In the area of safety, 2000 continued to be an outstanding year for the Fernald site. The site took another step to keep safety as the number one priority by obtaining Integrated Safety Management (ISM) verification, eight months ahead of a September 2000 deadline. ISM is a program within the DOE Complex 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.

Following the success of ISM verification, on June 16, Fernald employees reached a 5 million safe work hour milestone. This milestone represented the longest consecutive safe work hour streak since the site began its environmental restoration mission. At the close of 2000, the site continued their safe work hour total of more than 6.9 million hours without a lost-time accident. The Greater Cincinnati Building and Construction Trades Council also had another outstanding year. The Building Trades is a union organization that represents more than 200 wage workers at Fernald. On Dec. 1, 2000, the Building Trades and their representative companies completed eight years without a lost-time accident at Fernald, which translates to more than 3.9 million safe work hours.

Fernald also pursued the Department of Energy's Voluntary Protection Program (DOE VPP) STAR status. The DOE VPP program seeks to mitigate risk in the workplace by encouraging Safety & Health programs that demonstrate a level of excellence that can only be achieved through full involvement and commitment by management and employees. The findings of the review were taken back to the Department of Energy Headquarters DOE-HQ for evaluation and were continuing to be evaluated in December.

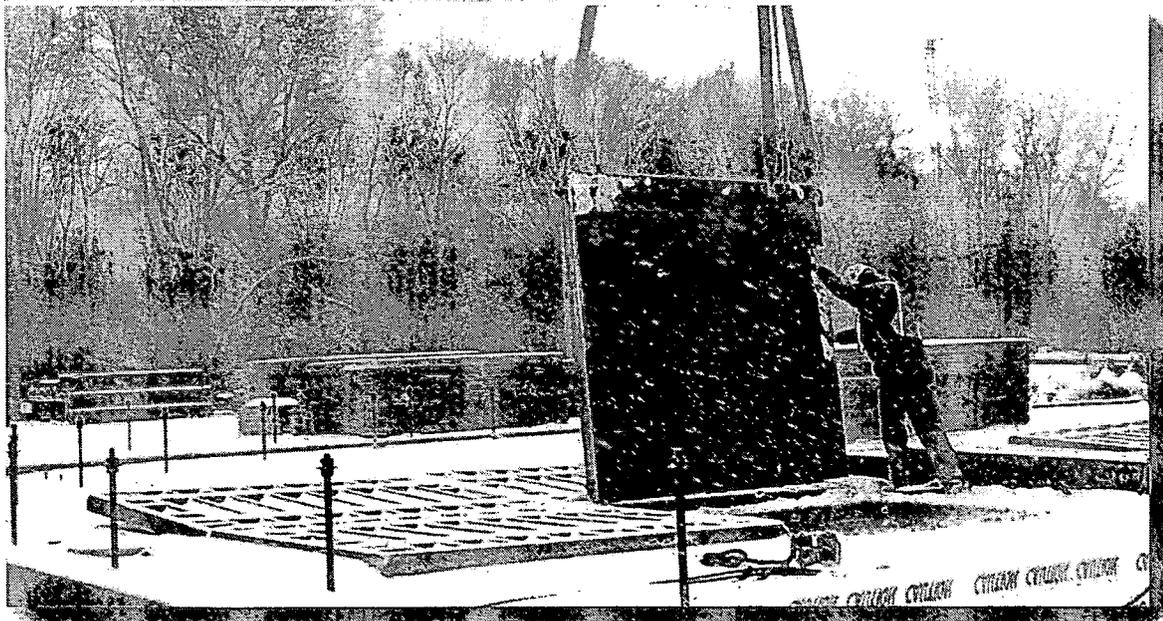
In addition, the site received five Tri-Star Awards from Fluor Corporation Safety. All of the accomplishments were significant within the industry considering the nature of the work that is performed at Fernald and the extra precautions that are necessary when working with low-level contaminated materials. Fernald will continue its commitment to keeping safety first.

Cleanup Progress Update



Above:
A lab technician takes a sample of waste material from one of the waste pits. The waste pit sample material will then be placed in an oven to dry (6944-d1355).

Right:
On a snowy morning, a worker prepares to place a concrete form wall for the Radon Control System (7385-d0477).



Waste Pits Remedial Action Project

- Shipped Unit Trains 31, 32 and 33, allowing the project to safely ship over 200,000 tons of waste off-site to Envirocare of Utah.
- Completed the fifth and final phase of the Sequential Operation Monitoring Program.

Silos Project

- Submitted the revised Silos 1 and 2 Accelerated Waste Retrieval (AWR) Project Remedial Design Package to the U.S. EPA and OEPA for final review and approval.
- Continued AWR Project construction activities – poured the interior walls and some of the exterior wall for the Radon Control System Air Handling Building.
- Began erection of the first floor walls for the Transfer Tank Area Building.
- Initiated work on the conceptual design for Silos 1 and 2.

Cleanup **Progress** Update



Soil & Disposal Facility Project

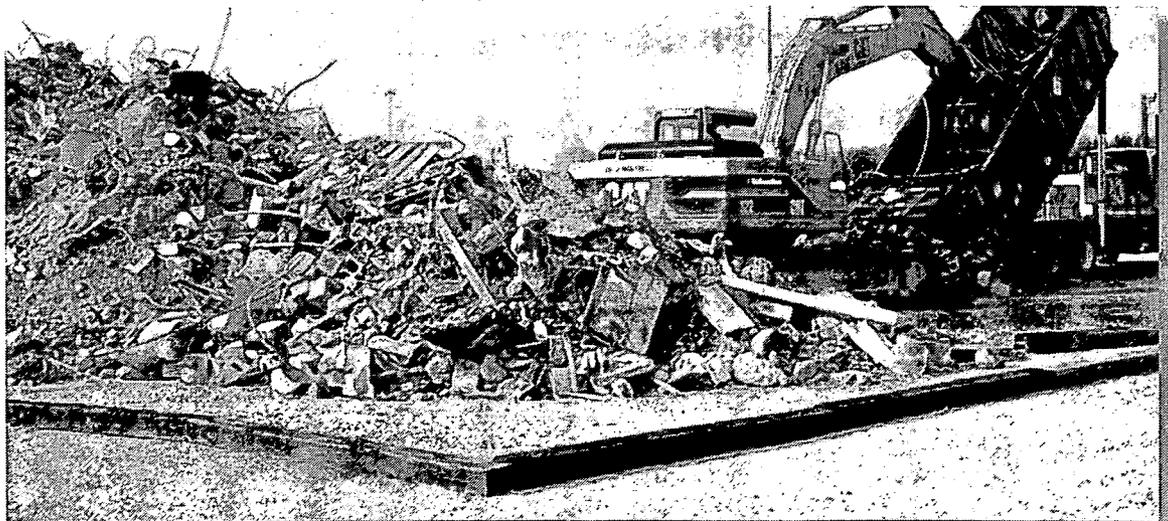
- Continued operation of the Bulk Debris Transfer Expansion Area; over 330 rolloff boxes have been emptied.
- Received U.S. EPA approval of the Implementation Plan for Paddys Run Debris Removal/Bank Stabilization project.
- Completed the Cultural Resources Survey for work in Area 1 Phase III.
- Submitted the 2000 Ecological Research Grant Project Annual Reports to the DOE.
- Submitted the first year Wetland Project monitoring report to the Agencies.

Aquifer Restoration/Wastewater Project

- Continued geo-probing in the South Field Area in support of the South Field Phase II Module design.
- Continued pre-engineering building installation at six valve houses supporting the Enhanced Permanent Leachate Transmission System.
- Completed maintenance on Re-Injection Well #10 and resumed operations.

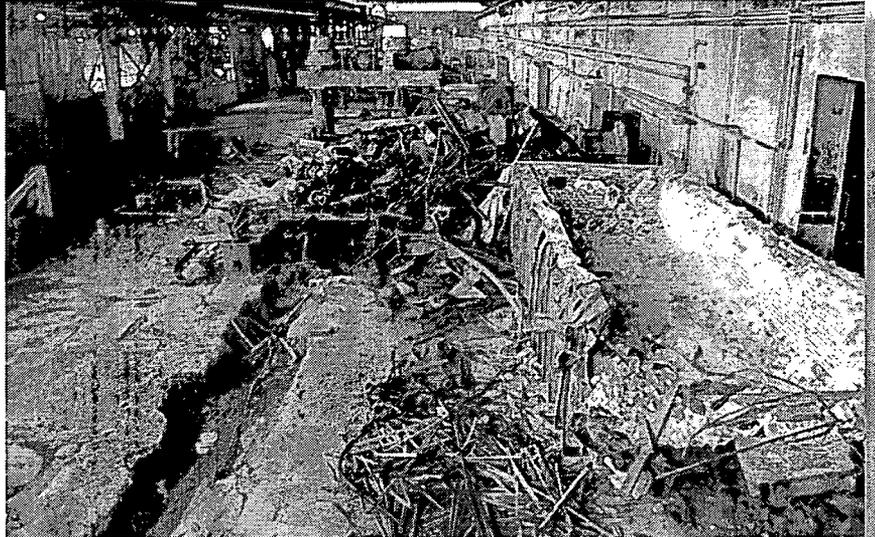
Above: A Geosyntec employee measures the density compaction prior to backfilling the Enhanced Permanent Leachate Transmission System (7399-d0457).

Right: Material is being off-loaded at the On Site Disposal Facility Interim Storage Area (ISA). The material will be staged at the ISM until the cell is re-opened in the spring (7466-d0117).



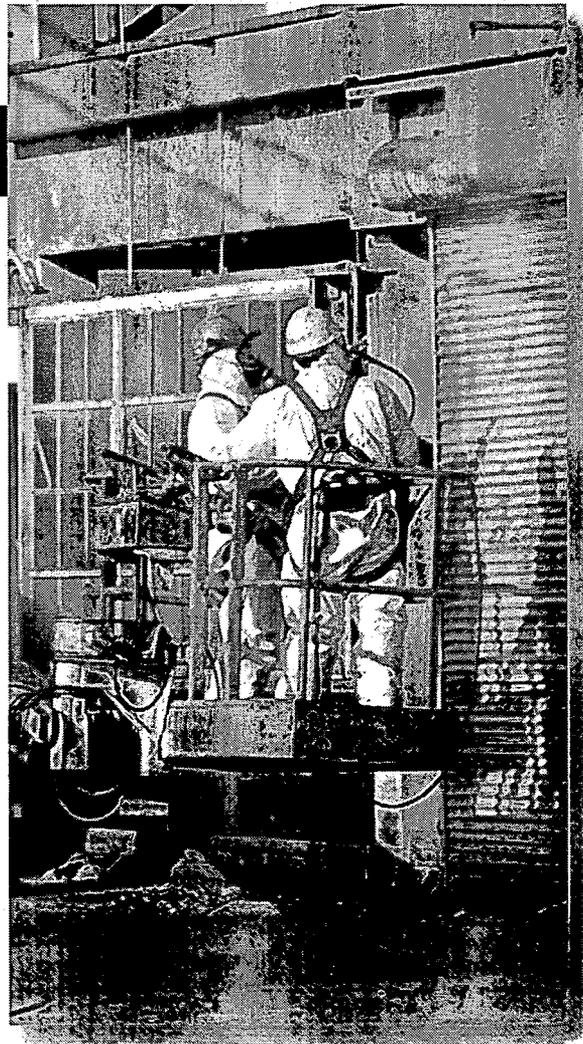
Demolition Projects

- Plant 5 Complex —
 - ◆ Completed removal of the metal siding on Building 5A.
 - ◆ Continued removal of exterior transite and structural steel.
 - ◆ Began shearing structural steel.
- Plant 6 Complex—
 - ◆ Continued the removal of equipment and asbestos contaminated material.
 - ◆ Began interior demolition of the Water Treatment Area and Old Ingot Furnace Stack.
- Facilities Shutdown—
 - ◆ Continued isolation activities in the General Sump area.



Waste Generator Services

- Thorium Legacy Waste Project —
 - ◆ Completed three shipments of thorium residues to the Nevada Test Site; 24 of 31 shipments completed.
- Waste Treatment and Storage—
 - ◆ Continued Plant 1 Pad consolidation and inventory verification activities.
 - ◆ Completed Batch 10 (approximately 20,000 gallons mixed waste liquids) sampling analysis and began developing Toxic Substance Control Act Incinerator application.
 - ◆ Continued bulking of selected mixed waste liquids into Batch 11.
- Nuclear Materials Disposition —
 - ◆ Continued shipments of nuclear materials to a DOE facility at Portsmouth, Ohio — total of 90.4 metric tons uranium (MTU) shipped in FY01 as of Jan. 31.
 - ◆ Approximately 3,263 MTU have been transferred since June 1999, representing 86% of the 3,801 MTU inventory destined for Portsmouth.



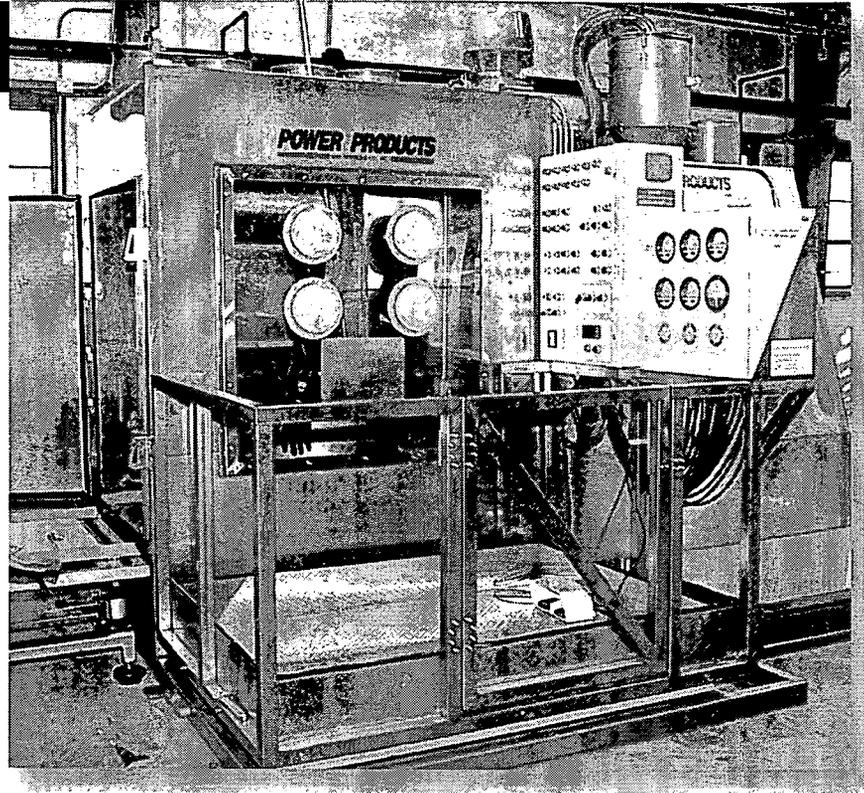
Top: A view of in-process demolition on the former Rolling Mill that was used inside of Plant 6 during production. Demolition of Plant 6 continues on schedule (6639-d0660).

Left: MACTEC employees spray lock-down on one of the rollup doors on Building 5A (6401-d0725).

Cleanup Progress Update

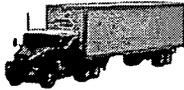
Waste Generator Services

- Nuclear Materials Disposition — *continued*
 - ◆ Began installation of vacuum transfer system in Building 56.
 - ◆ Working with the private sector customer to finalize contract a for sale of 80 MTU of enriched uranium metal.
 - ◆ Continued characterization of selected containers within the Uranium Waste Disposition Project.



Right: A view of the vacuum system that will be used to repackage >1 percent U-235 enriched uranium compounds and oxides into shippable quantities (7536-d0007).

Fernald Shipments — January-2001

Contents / Destination	Shipment Mode	No. of Shipments	Monthly Total	FY00 Total
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Contents / Destination</div> Low-Level Waste (Nevada Test Site)		20	28,121 cu. ft.	55,665 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		0	0 gal.	0 gal.
Nuclear product/materials (Portsmouth)		28	39,926 net lbs. or 14.8 metric tons uranium	218,060 net lbs. or 90.4 metric tons uranium
Waste Pits Project (Envirocare of Utah, Inc.)		0 unit trains (0 railcars)	0 tons	19,873 tons

Graphics # 5949

DOE awards closure contract to Fluor Fernald

The Department of Energy (DOE) awarded a closure contract for the Fernald Environmental Management Project to Fluor Fernald on Nov. 20, 2000. The ten-year, cost reimbursable contract is valued at \$2.4 billion. "We are very pleased with the Department's decision to award us a closure contract," said John Bradburne, Fluor Fernald president and CEO. "This award would not have been possible without the support of our workforce, stakeholders and regulators. We're grateful for this vote of confidence and are looking forward to the challenges ahead."

Based on anticipated annual funding of \$290 million dollars, the cleanup is officially slated for completion in 2010, but DOE has challenged Fluor to bring forward its best ideas for schedule acceleration. "Clearly our goal is to achieve site closure, without compromising safety or quality, well ahead of the 2010 deadline," Bradburne said. "We will, of course, be involving our stakeholders in determining the best way to accomplish this goal."

To mirror its focus on closure, Fluor has reorganized its management structure to highlight the importance of completing certain critical path projects, particularly Nuclear Material Disposition and the Silos Project. "Two of our top priorities will be eliminating our inventory of nuclear material and treating the waste in our Silos," Bradburne said. "The accomplishment of each of these tasks will be a huge step closer to our ultimate goal of site closure."

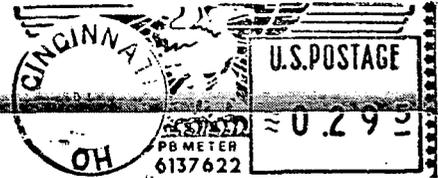
According to Steve McCracken, DOE-Fernald site director, "This contract allows Fernald to continue an accelerated pace of remediation and provides our neighboring communities with a safe, efficient and thorough cleanup."

Below: Loretta Parsons, the Department of Energy's contracting officer at the Fernald site, seals the deal by signing the 10-year, \$2.4 billion closure contract as John Bradburne, Fluor Fernald president and CEO, looks on (7496-d014).



3554

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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):

- Soil Characterization and Excavation Project
 - ◆ Tie-In Plan for Enhanced Permanent Leachate Transmission System Project (Tie-In Plan – Valve Houses to OSDF Cells {LDS, RLCS Piping} Enhanced Permanent Leachate Transmission System {EPLTS} Project Per Technical Specification 20111-TS-001, Section 02050, Revision 0
 - ◆ OEPA Letter: Approval of Project Specific Plan for Paddy's Run Real-Time Scan
 - ◆ USEPA Letter: Area 9, Phase II Precertification Real-Time Scan
 - ◆ USEPA Letter: Paddy's Run and Adjacent Areas Real-Time Scan Responses to Comments
- Facilities Closure and Demolition Project
 - ◆ Operable Unit 3 Miscellaneous Small Structures Decontamination and Dismantlement Project, Task Order #464 Completion Report
- Aquifer Restoration Project
 - ◆ October 2000 Re-Injection Operating Report
- Miscellaneous
 - ◆ Consolidated Consent Agreement / Federal Facilities Compliance Agreement / Federal Facility Agreement / Remedial Investigation/Feasibility Study / Consent Decree Monthly Report for the Period of November 1, 2000, Through November 30, 2000
 - ◆ Proposed Changes to the Fernald Environmental Management Project Site Treatment Plan
 - ◆ Integrated Environmental Monitoring Status Report for Third Quarter 2000
 - ◆ OEPA Letter: Northern Pine Plantation Restoration Project



Fernald Report

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12