fernald Report

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September 1999

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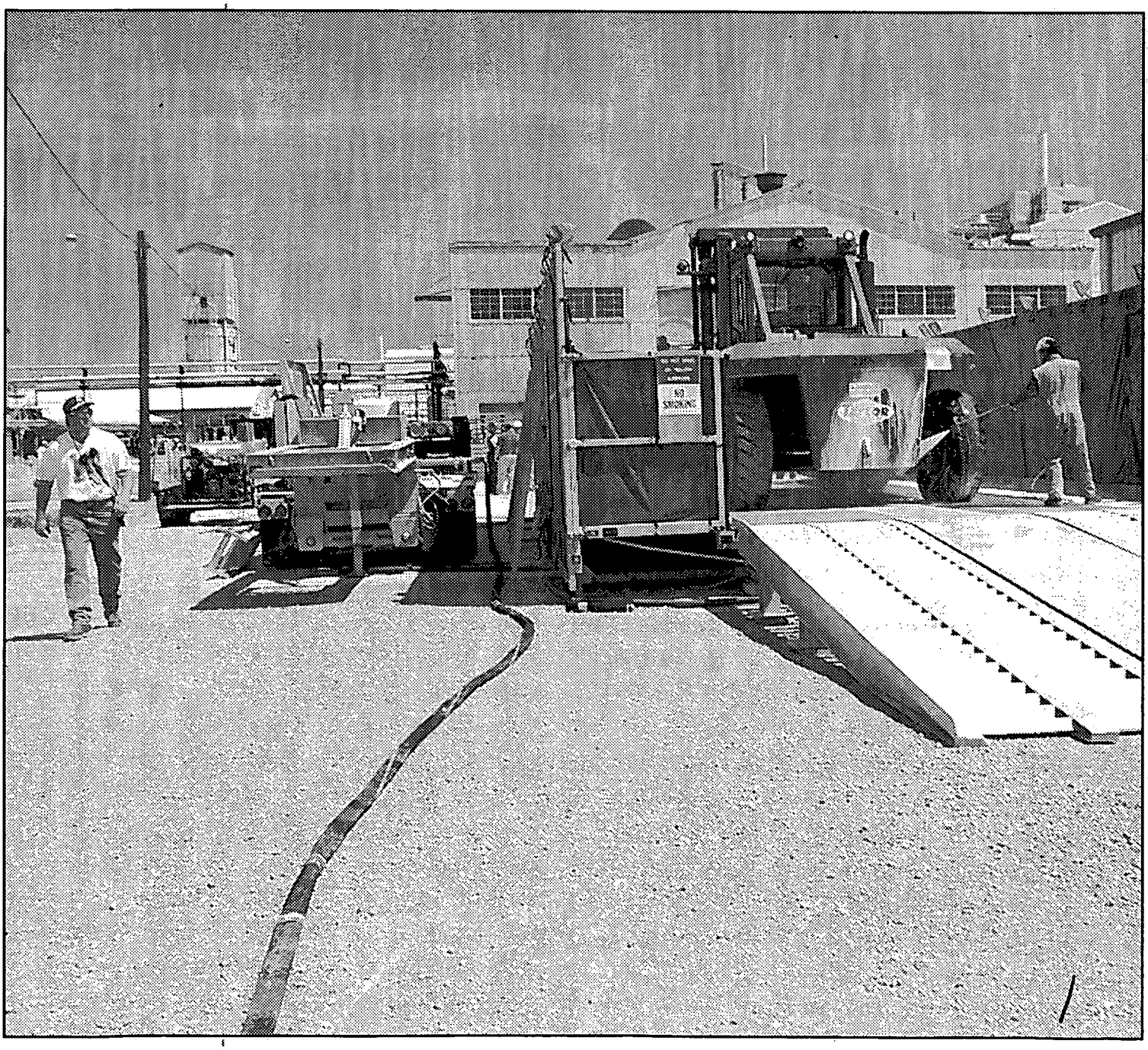
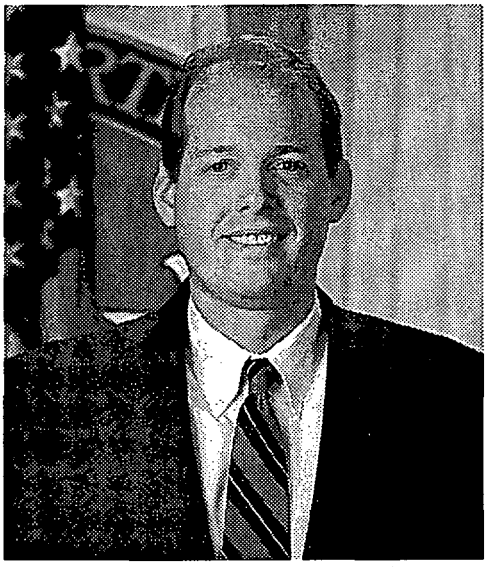


message from
Jack Craig

High-level attention

The past six months have been very busy, and not just within the projects. Public tours and high-level visits are not unusual at Fernald. In fact this year we've had over 1000 visitors. Recently our profile has grown as we've attracted the attention of Energy Secretary Bill Richardson as well as Dr. Carolyn Huntoon, Assistant Secretary for the DOE's Office of Environmental Management; Jim Fiore, Acting Assistant Secretary for Environmental Restoration; Gerald Boyd, Acting Deputy Assistant Secretary for the DOE Office of Science and Technology, and Jim Owendoff, Principal Deputy Assistant Secretary for Environmental Management.



We are proud of the job that our workforce is doing and it is gratifying to know that others acknowledge and want to see our progress. As we continue to move forward with our cleanup efforts, we always welcome visits from our stakeholders. There is nothing like being here and seeing the work in order to have a greater appreciation on the project. Our site tours offer the opportunity to see the work up close, get the latest information and ask questions. You will see that buildings are coming down, waste is being shipped off site and areas of the site are being restored to their natural state. As our skyline changes, we know that we are one step closer to achieving the overall cleanup mission and eventual closure of the site.

Jack Craig
Director, DOE-Fernald

On the cover: *The self-contained mobile decontamination unit measures 45 feet by 24 feet and has the ability to clean pieces of equipment weighing up to 80,000 pounds (7204-d04).*

Pit excavation begins

On Sept. 3, the Waste Pits Project broke ground on the soil cover of Pit 3, one of six waste pits which combined, contain over 1 million tons of material contaminated from Fernald's production operations. Over the next five years, Fernald will excavate, blend, sort and process the waste to meet Envirocare of Utah's waste acceptance criteria and ship the waste by rail to Envirocare for disposal.

In operation from from 1958 through 1977, Pit 3 contains almost half of the waste associated with the Waste Pits Project, and at about five acres, encompasses about a third of the 15-acre total waste pit surface area.

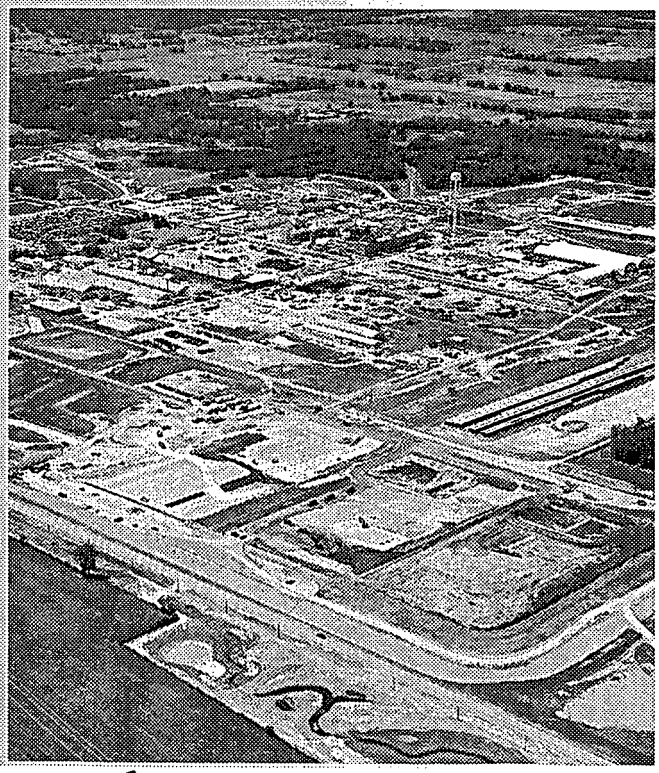
Above: The Waste Pits Project will excavate about 3,000 to 5,000 tons of waste per week in order to meet the railcar loading rate of 25 railcars per week (6944-d876).

As the waste is excavated, workers haul the material by truck to the Material Handling Building for processing (e.g. remove excess moisture). The material will then be loaded into railcars for shipment to the disposal facility. Already this year, Fernald has safely transported over 43,000 tons of contaminated soil to Envirocare.

Until the treatment facilities and thermal dryers are fully operational, the project will only excavate, process and ship waste that does not require drying. Fernald plans to perform rigorous safety tests of the facilities and dryers in September with full-scale operations scheduled to begin later this year.

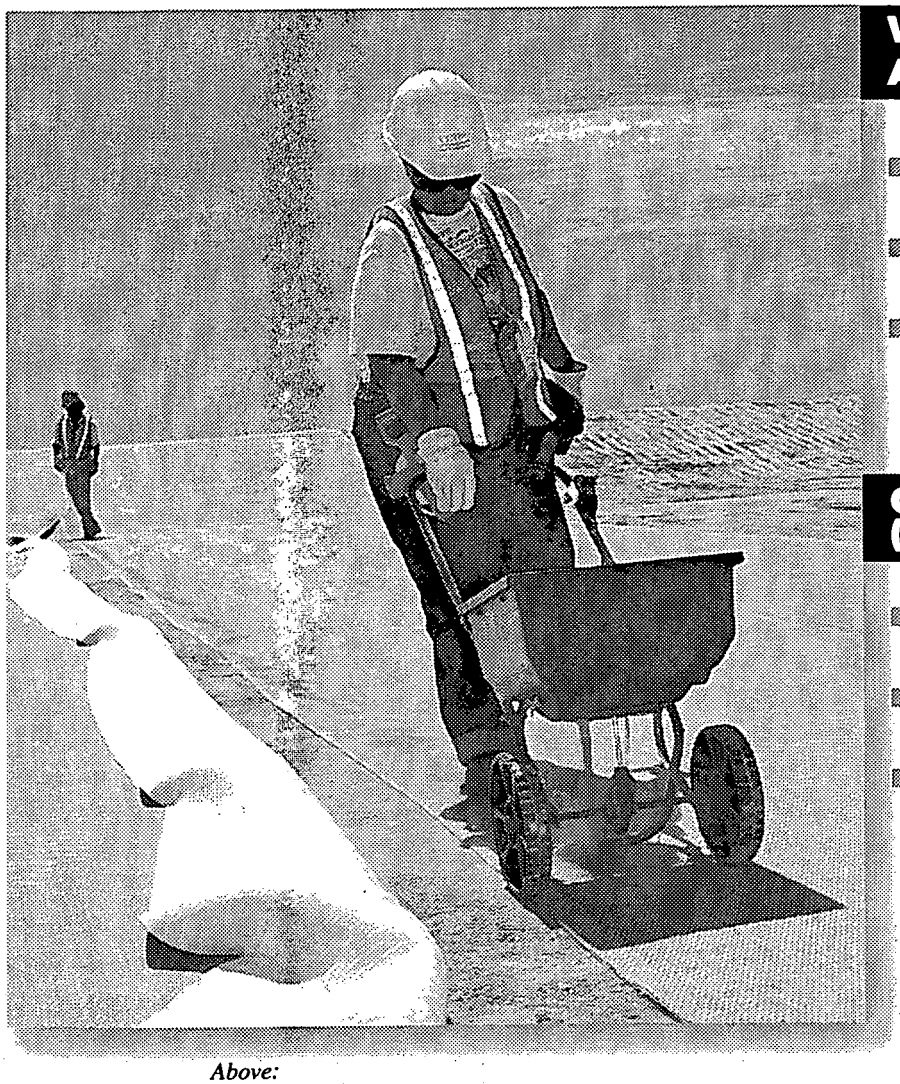
DOE Source Evaluation Board formed

A multi-disciplined team of representatives from the Department of Energy (DOE) Ohio Field Office, DOE-FEMP and DOE-Headquarters has been formed to prepare a request-for-proposal for the Fernald closure contract. Following the issuance of the request-for-proposal, the Source Evaluation Board will evaluate the bids received and make a recommendation on the proposed contractor. Members of the Source Evaluation Board were selected based on their governmental experience and areas of expertise. The team is presently in the initial stages of organization. Additional information about the contracting process will be shared with stakeholders as it becomes available. Energy Secretary Richardson announced the department's intention to rebid the Fernald contract in August, citing a desire to encourage the incumbent contractor and other bidders to bring forth their best ideas for innovation and efficiencies critical to achieving the goal of site closure by 2006. Fluor Daniel Fernald, whose current contract expires in November 2000, has announced that it will bid on the closure contract.



Right: A number of major site cleanup projects remain to be completed by the targeted site closure date of 2006 (7213-188).

Cleanup **Progress** Update



Waste Pits Remedial Action Project (WPRAP)

- Shipped seventh unit train to Envirocare of Utah on Aug. 4
- Performed the Pit Excavation Standard Startup Review
- IT Corp. completed construction of remaining facilities needed to support pit excavation

On-Site Disposal Facility (OSDF)

- Continued placement of impacted materials in Cells 1 and 2
- Began construction of secondary liner system in Cell 3
- Completed construction of Cell 3 clay liner

Above:
A laborer spreads bentonite granules along the geosynthetic liner seam to prevent any fluids from getting into the OSDF clay liner (6319-d2139).

Right:
Petro Environmental workers prepare for the Cell 3 geosynthetic tie-in by exposing the geosynthetic clay liner (6319-d2110).

Demolition Projects

Facilities Shutdown

- Continued utility isolation of General Sump Complex

Decontamination & Dismantlement (D&D)

- Plant 5 Complex —
  - Began preparing Building 5E for demolition
  - Completed pre-mobilization activities
  - Continued D&D of Building 12A and pipe bridges
  - Continued installation and testing of underground water lines for water storage tank
- Miscellaneous Small Structures Project
  - Began field work on Building 63

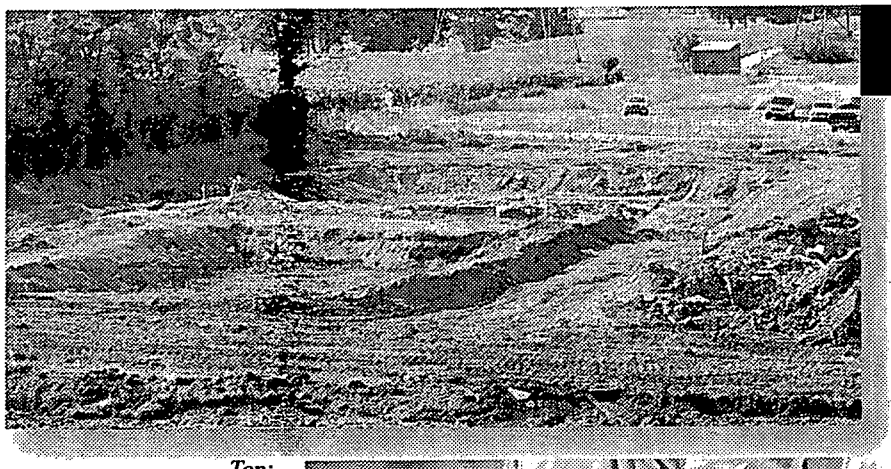
Silos Project

- Continued preparation of *Silos 1 and 2 Revised Feasibility Study*
- Continued review of contractor submittals for work associated with Silo 3 Project and Silos 1 and 2 Accelerated Waste Retrieval Project
- Completed Silos Infrastructure Project construction activities

Above:
The old lumber storage building is being wet down to reduce dust during shearing activities (7177-d72).

Left:
Road upgrades are complete to support future removal of waste from the silos (6971-d244).

Cleanup **Progress** Update

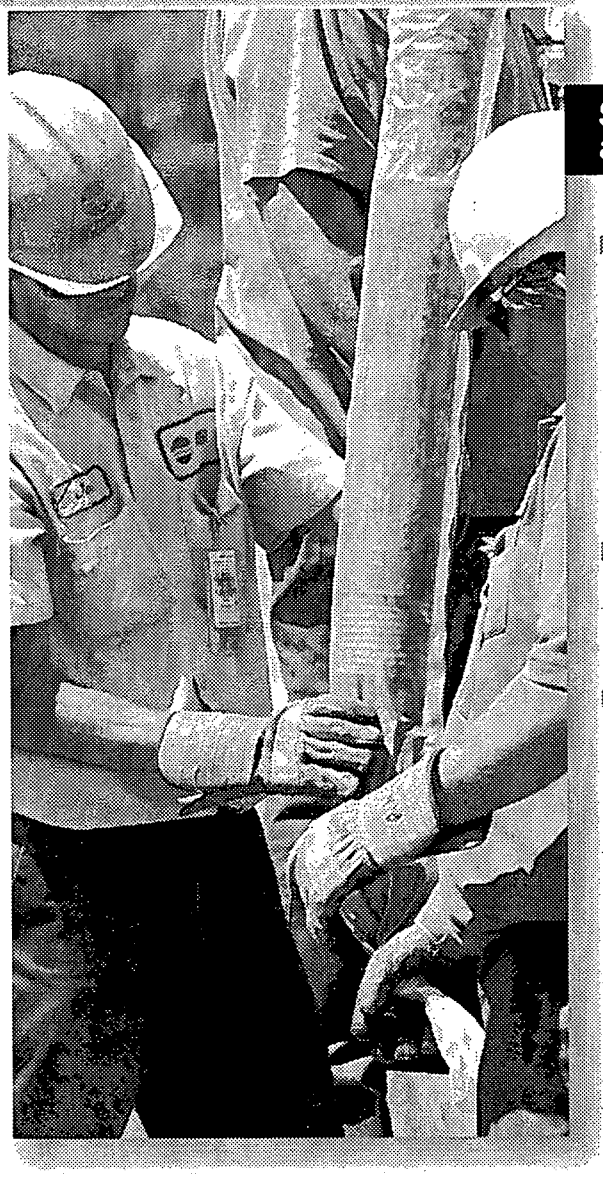


Aquifer Restoration/ Wastewater Project

- Continued construction of Advanced Wastewater Treatment Facility Laboratory Expansion
- Began installation of two new extraction wells in South Field
- Completed System Operability Testing for Sludge Removal System at Stormwater Retention Basin and Biosurge Lagoon
- Installed four new monitoring wells; two in the South Field area and two in the South Plume area

Top: Excavated soil by the old Sewage Treatment Plant is being hauled to the OSDF for disposition prior to the final certification of Area I Phase II (6620-d318).

Right: Well drillers take a soil sample to determine its composition prior to a future well installation (7207-d08).



Soil Characterization and Excavation Project

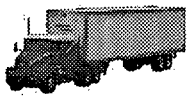
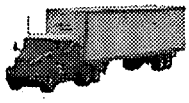
- Area 1 Phase II Southern Portion of East Field
  - Completed stabilization activities in Trap Range area and submitted Verification of Treatment Report to regulatory agencies
  - Completed demolition and hauling of materials in various areas of old Sewage Treatment Plant (STP); initiated excavation and size reduction of underground utilities inside STP
- Area 2 Phase I Southern Waste Units
  - Continued excavation of South Field stockpiles
  - Began excavation of South Field
- Area 2 Phase III South Central Portion of Fernald Site
  - Completed all certification sampling; analysis of samples is 50 percent complete

Waste Management Projects

- Thorium Legacy Waste Project —
  - Completed Standard Startup Review in preparation for shipment of thorium waste to Nevada Test Site
- Nuclear Materials Disposition —
  - Continued repackaging of depleted uranium tetrafluoride (UF4) for shipment to DOE- Oak Ridge
  - Continued movement of Fernald uranium to DOE-Oak Ridge Portsmouth, Ohio

Left: Nuclear material team members prepare for an engineering evaluation of the waste container's integrity (7149-d153).

Fernald Shipments — August 1999

Contents / Destination	Shipment Mode	No. of Shipments	Monthly Total	FY99 Total
Low-Level Waste (Nevada Test Site)		6	12,163.5 cu. ft.	31,084.5 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		1	2,264 gal.	34,761 gal.
Nuclear product/materials (Portsmouth)		24	686,176 net lbs. or 251.1 metric tons uranium	2,829,513 net lbs. or 988.0 metric tons uranium
Waste Pits Project (Envirocare of Utah, Inc.)		1 unit train (50 railcars)	5,392 tons	38,567 tons (358 railcars)

Above: A high pressure water system efficiently cleans equipment (7204-d05).

Equipment decontamination made simple

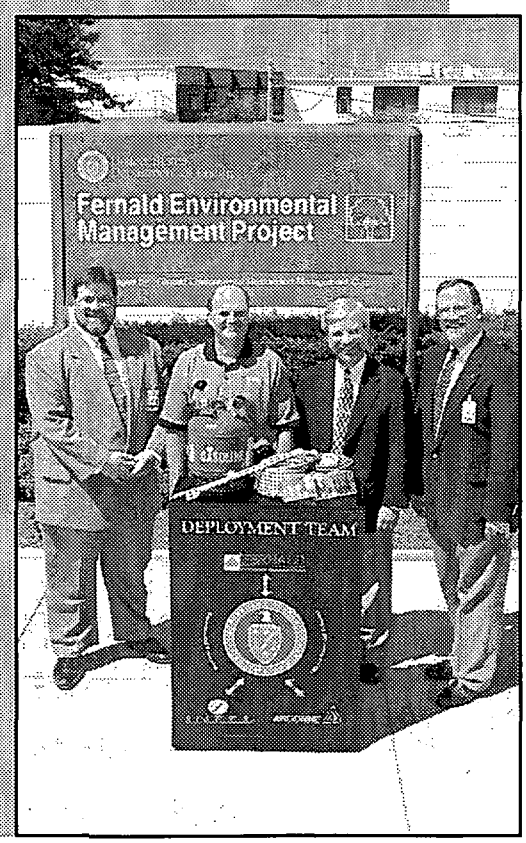
A self-contained, mobile decontamination unit will be added to the site's cleanup effort. The new, cost-saving equipment will decontaminate items ranging in size from small hand tools to bulldozers and excavators weighing up to 80,000 pounds. The mobile unit is located near building 18D, the Biodenitrification Effluent Treatment facility. The unit should be operational by the end of October. The stainless steel structure will resist contaminates and chemical agents for many years under heavy use. The mobile unit uses water to decontaminate the equipment. The water that is used for the decontamination process will then be contained in a polyurethane tank, sampled and then transferred for treatment to the Advanced Waste Water Treatment facility.

"The unit was a practical choice. Self decontamination allows the unit to be cleaned then moved to another area on-site or to another DOE facility," said Bob Henry D&D core group manager.

Vocational schools benefit from DOE's technology deployment program

The oxygen-gasoline torch was first demonstrated and deployed as part of the DOE Office of Science and Technology's (OST) Large-Scale Technology Demonstration project at Fernald. Fueled by gasoline, the cutting torch is considered to be faster, more cost effective and safer to operate than the more traditional oxy-acetylene torch. The torch's superior advantage is attributed to higher cutting temperatures with total oxidation of the metal and is designed to make backflash virtually impossible.

On Aug. 3, during a visit to Fernald by Gerald Boyd, DOE Associate Deputy Assistant Secretary for the DOE-OST, DOE, the Butler County Joint Vocational School and the Great Oaks Institute of Technology were each presented with a torch. "Finding better tools and better technologies is no good if you can't get them into the hands of the end-users," said Glenn Griffiths, DOE-FEMP Deputy Director. "What better way to gain acceptance of an innovative technology than to have training institutions integrate them into their programs."



Right: Presentation of the oxygen-gasoline torch: (left to right) Bill Solazzo, Butler County, Joint Vocational School; Glenn Griffiths; Gerald Boyd, and Steve Bowman, Great Oaks Institute of Technology, Hamilton County (7197-d14).

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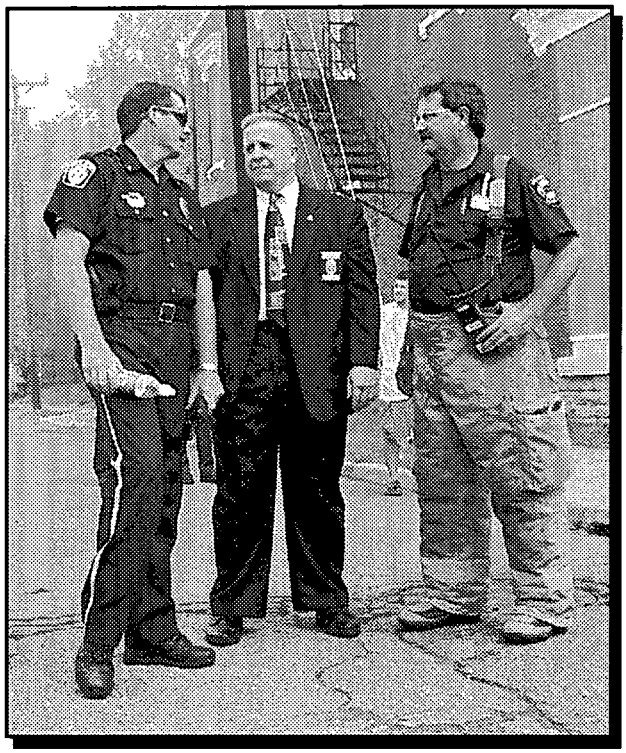
Attention Station 227



As you drive down the road and see flashing red lights in the areas of Ross, Crosby or Colerain Township, chances are that you may see one of the Fernald emergency response vehicles at the scene. If a call is sent out from the Fernald Communications Center for Station 227, the Fernald fire department knows automatically that they need to respond to an off-site emergency. With a staff of more than 30 trained firefighters, Fernald responds to mutual aid calls as part of an agreement among Ross, Crosby and Colerain Townships. These local departments do not have a large staff during the day, so Fernald extends their services to assist in mutual aid requests. During the evening hours when Fernald staffing is low, we rely on the local fire departments to help.

In 1998, Fernald responded to 194 mutual aid requests. Some of the runs consisted of emergency medical services, auto accidents and structural and vehicle fires. When responding to emergencies off site, a crew remains to protect the site. Fernald has the option of recalling any of the vehicles back to site, if needed. The mutual aid agreement is a win-win situation for all parties involved.

Firefighters attend monthly training to keep their skills current. The training is provided by a state fire instructor and certified by the state of Ohio. Fernald currently has three state qualified fire instructors on staff. "Training is essential," said Bill Prues, Fluor Daniel Fernald Emergency Services team coach. "Hands-on training gives us the skills and confidence to perform during the real thing."

Above: Gary Theurer (right), Fluor Daniel Fernald firefighter, talks with Harrison, Ohio officials during a recent mutual aid response for a structure fire (6152-d521).

Used equipment - new life

Many pieces of equipment that might otherwise be sitting idle are now hard at work at local colleges and universities. Computers, office furniture, electrical and mechanical equipment are some of the items that have been re-utilized. The DOE and Fluor Daniel Fernald have distributed, through the assistance of Energy Related Laboratory Equipment (ERLE) grants, over $12 million in governmental transfers and more than $7 million in donations to state, local and non-profit organizations.

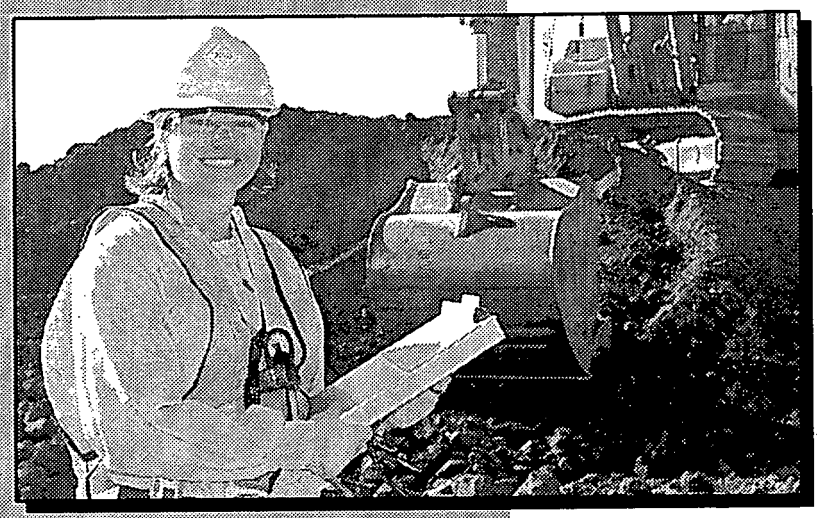
In the last year, Fernald donated equipment, through an ERLE grant, to Cincinnati State Technical & Community College. Chuck Jonas, director of the Workforce Development Center was delighted to receive the equipment. "With the donations, we are able to provide hands-on training that is second to none in the tri-state," Jonas said. On Aug. 18, Fernald employees took a tour of Cincinnati State's facility to gain knowledge and view the equipment that was donated from Fernald.

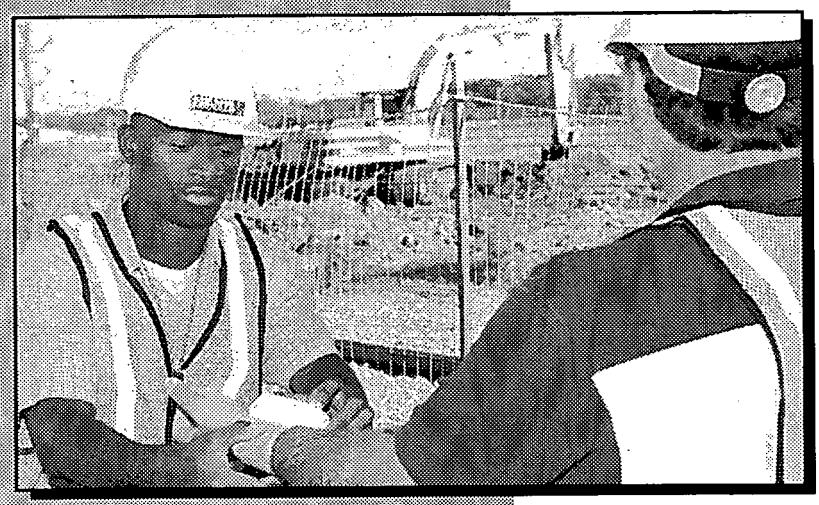
Below: Fernald visitors tour the Cincinnati State facility and look at the newly installed equipment donated by Fernald (7205-d04).

A Valuable Partnership

Interns are a valuable asset to Fernald's cleanup effort. Each year, a melting pot of students arrive from the University of Findlay, Miami University, University of Cincinnati, Cincinnati State, historically black colleges and universities and minority institutions. Approximately 50 undergraduate and graduate students from around the country are placed in a wide variety of fields, such as, public affairs, waste management, environmental compliance and construction management.

Fernald, students and the schools all benefit from the intern partnership. Students are given an opportunity to explore career options and make themselves marketable while Fernald is provided with additional skilled talent. The community is perhaps the greatest benefactor. Fernald gives back to the community as students apply their intern experience to their careers and continue to grow.





Above right: An Environmental Science major, Kelly Krupa gained work experience with the Waste Acceptance Operations organization at the Southern Waste Units (7217-d09).

Right: University of Cincinnati intern, David Olomajeye monitors heat stress for employees working at the Sewage Treatment Plant Excavation project (7217-d06).

Progress update video premiers

Beginning Oct. 1, a project-focused videotape will be the latest way to see the work taking place at Fernald. The program is narrated by Johnny Reising, DOE-FEMP Associate Director for Environmental Management and Terry Hagen, Fluor Daniel Fernald Director of Strategic Planning. The tape which will be updated every six months can be used at presentations and for community meetings. Copies of the video are available on-site or at the Public Environmental Information Center. The video will soon be available for viewing on the Fernald web site.

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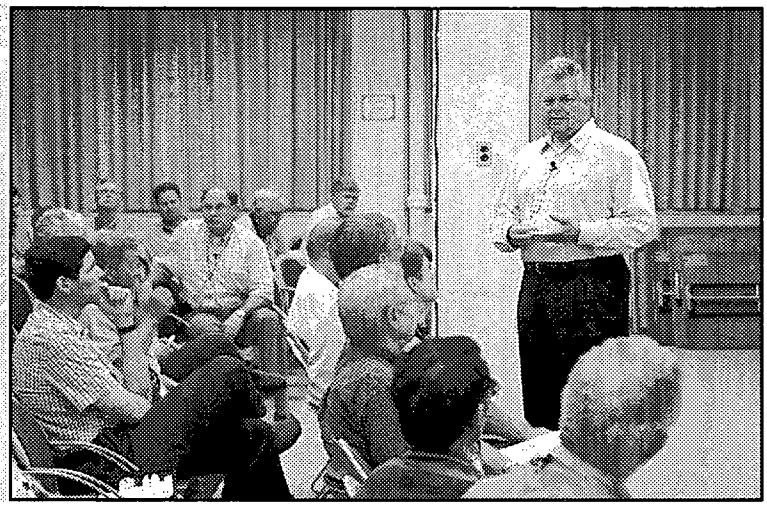
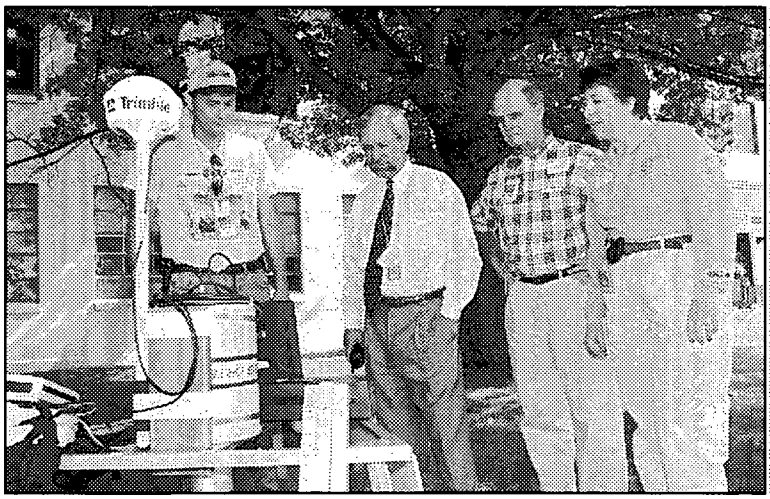
Recent Tours

Jim Stein, president and CEO of Fluor Global Services, recently spent a day meeting with DOE, Fluor Daniel Fernald team members, stakeholders and union leadership.

Right: Mr. Stein spoke in an open forum to Fluor Daniel Fernald team members. He emphasized his commitment to the cleanup of Fernald in a safe, efficient and timely manner (7188-d17).



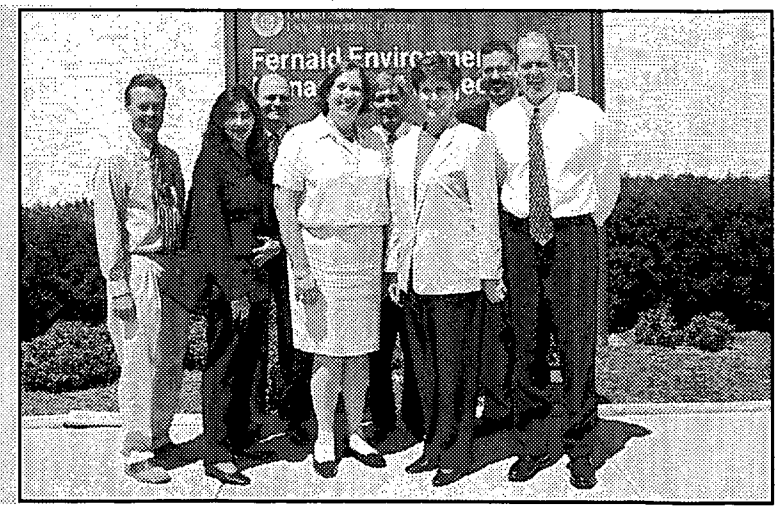


On Aug. 3 and 4, Fernald hosted a Technology Open House for members of the DOE Office of Science and Technology (OST) Subsurface Contaminants Focus Area. Gerald Boyd, Associate Deputy Assistant Secretary for the DOE-OST, attended the event which focused on successful demonstrations and deployments of technologies at Fernald and other DOE sites.

Left: Visitors had the opportunity to see a demonstration using real-time monitoring (RTM) equipment, a project funded in part by OST. Photo: Mr. Boyd, second from left, looks on while Darren Wessel (far left) of the RTM group explains how the equipment operates (7197-d02).

Dr. Carolyn Huntoon, Assistant Secretary for DOE's Office of Environmental Management, visited Fernald on Aug. 5. Part of her responsibilities is to oversee the cleanup of DOE's former nuclear weapons sites. During the visit, Huntoon met with DOE and Fluor Daniel Fernald senior staff, union officers and stakeholders.

Right: (from left to right) Johnny Reising, DOE-FEMP Associate Director; Amina Khan, Special Assistant; Glenn Griffiths, DOE-FEMP Deputy Director; Susan Brechbill, Manager of Ohio Field Office; Robert Folker, Assistant Manager Ohio Field Office; Dr. Huntoon; Dave Kozlowski, DOE-FEMP Associate Director; and Jack Craig, DOE-FEMP Director (6810-d251).



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
  - Final Waste Pits Remedial Action (WPRAP) Remedial Action Package
  - Responses to OEPA and USEPA Comments on the Draft Final Remedial Action Package for OU1
  - Draft Non-Typical Waste Management Plan for Waste Pits Remedial Action Project

- Soil Characterization & Excavation Project
  - Addendum 1 to Impacted Materials Placement Plan On-Site Disposal Facility Specialized Placement Plan for Bagged Impacted Material
  - Project Specific Plan for Pre-design Sampling in the Area 2, Phase II - Parts Two and Three
  - Project Specific Plan for Area 3A/4A Subsurface Pre-design Investigation
  - Project Specific Plan for Sampling of the Advanced Wastewater Treatment Facility Soil Stockpile for On-Site Disposal Facility Waste Acceptance Criteria Attainment

- Aquifer Restoration Project
  - May 1999 Operating Report for the Re-injection Demonstration

Note: This does not represent the complete list of new documents added to the PEIC for the month of July. Contact the PEIC, (513) 648-7480 for a complete list of new documents.

Fernald Report
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