

# fernald Report

Inside

- Rail shipping begins!
- Plant 5 demolition contract awarded
- Students beautify Fernald

2267

May 1999



## Rail shipments begin - other challenges remain

We reached another cleanup milestone in late April when the first unit train carrying material from Fernald's Waste Pits left the site en route to Envirocare. This rail shipment was the first of approximately 100 unit trains expected to leave Fernald between now and 2004. In all, about one million tons of material will be removed and safely disposed of as part of our goal to cleanup the site. Significant time and effort went into getting the first

train outside the Fernald gate including close coordination with IT Corp., the rail carriers and Envirocare. Stakeholders, regulators and contractors have good reason to share in the satisfaction of accomplishing this significant part of a challenging project.

Now that we are in the loading and shipping phase of this project, the next task will be to begin excavating pit material that does not require drying. This should happen in July. Full-scale operation, including use of the dryers, is scheduled to begin in August. During this phase of the operation, we will move about 50 trucks a day to the Material Handling Building and process between 600 and 1,000 tons of material every day.

After talking to the members of this project and seeing the work that has been completed so far, it is clear once again that the quality of the people working on Fernald projects is the reason we are successful. This continues to be a time of significant change at Fernald. I encourage you to visit our web site at [www.fernal.gov](http://www.fernal.gov) if you would like to learn more about this project.



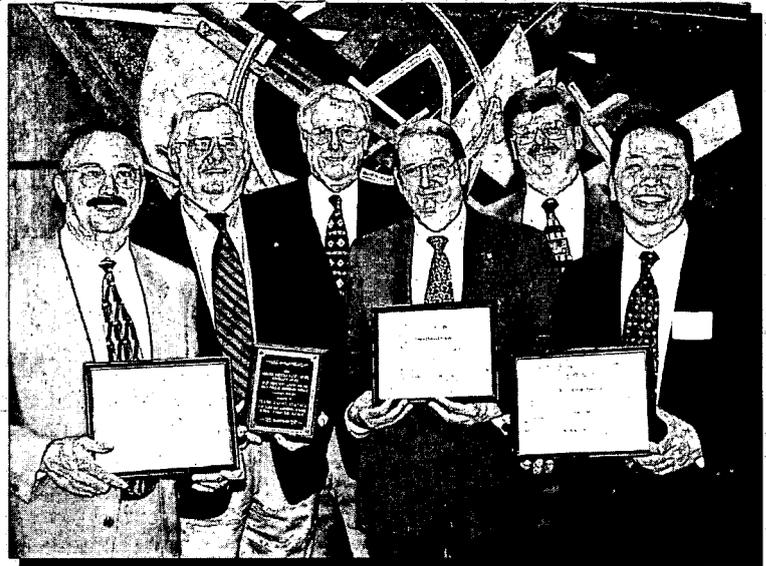
*Jack Craig*  
Jack Craig  
Director, DOE-Fernald

On the cover: Jeff Rowe (middle) and Steve Capano (right) hand over a bill of lading to a CSXT engineer. This document describes the type of waste contained in 54 gondola cars transferred to Envirocare (6944-D0736).

2

## Plant 5 contract awarded

On April 22, Fluor Daniel Fernald awarded an \$8.7 million contract for the decontamination and dismantlement of Plant 5, the former Metals Fabrication Plant, to MACTEC Inc., a small business based in Golden, Colo. While this is the company's first contract at Fernald, it has done a significant amount of work within the Department of Energy (DOE) complex. Once a notice-to-proceed is issued, MACTEC will have 730 days to complete the project. According to Pat O'Neill, Fluor Daniel Fernald's construction manager for the project, the notice-to-proceed is expected to be issued in late May, with field work beginning in mid-July. The contract also includes the demolition of Building 4B and the former Plant 8 Warehouse, which is scheduled to be complete by May 2001.



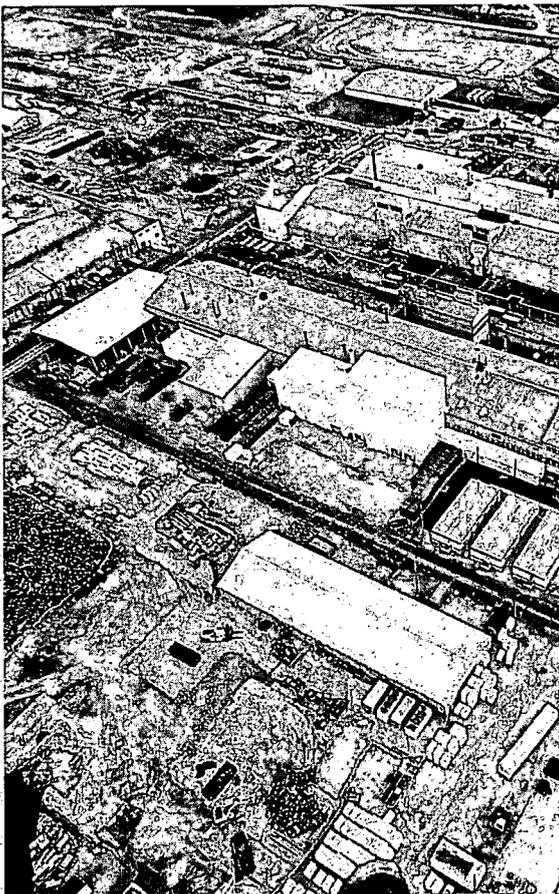
## Fernald wins safety awards

In 1998, Fluor Daniel Fernald team members worked more than 3.5 million hours without a lost workday accident and reduced their number of recordable injuries by almost 50 percent. To mark this accomplishment, the Greater Hamilton Safety Council presented Fernald with several prestigious safety awards including:

- Chairman's Award — for best industrial safety record for working 3,960,850 man-hours without a lost-time accident;
- Group Award — for the lowest incident rate;
- 100% Award — for working entire year without a lost-time injury;
- Achievement Award — for decreasing our incident rate by at least 25 percent from the previous year;
- Special Award — for accumulating at least 500,00 hours and achieving six months without a lost-time injury.

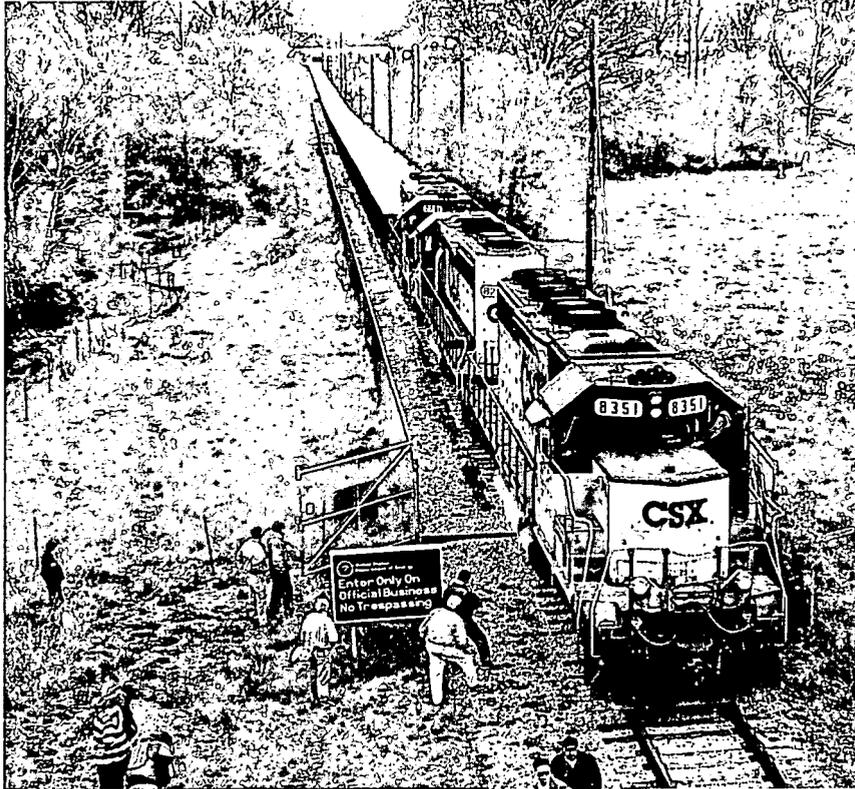
Fernald's Leadership Team attributes this achievement to each team member's diligence in making safety their highest priority.

*Top: Proudly accepting the awards from the Hamilton Safety Council are: Fluor Daniel Fernald: Robert Holley, Project Support Services; Jamie Jameson, vice president of Operations; Steve Wentzel, Soil & Water Projects; Bob Heck, vice president of Oversight and Program Integration; Keith Lanning, Soil & Water Projects; Barry Ko, Oversight and Program Integration (7108-D0064).*



Above: MACTEC Inc. is the company selected to dismantle the Plant 5 complex and the Plant 8 Warehouse. The demolition is scheduled to be complete in May 2001 (7021-68).

# Cleanup **Progress** Update



## Waste Pits Remedial Action Project (WPRAP)

- Completed and signed Rail Tender with CSXT and Union Pacific Railroads
- Shipped first unit train to Enviocare of Utah on April 26, 1999, which consisted of 54 railcars carrying approximately 5,500 tons of waste; safely reached Enviocare on May 1, 1999
- Continued loading waste into railcars in anticipation of next unit train shipment

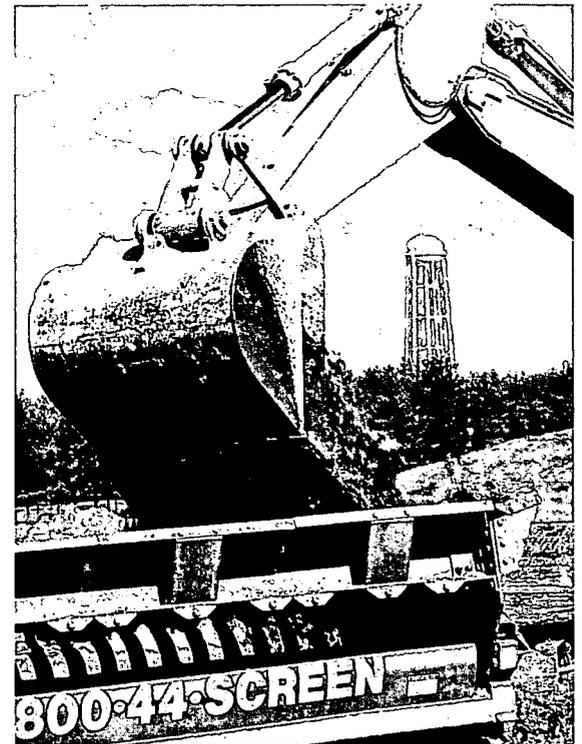
## On-Site Disposal Facility (OSDF)

- Issued a report analyzing the leaks found within the Leachate Conveyance System
- Began installation of Interim Leachate Transmission Line
- Initiated screening of clay in Borrow Area

*Above: The first train prepares to leave Fernald. It would take about five trucks to carry the amount of stored waste in one gondola car (6944-D0784).*

*Right: From left, a CSX engineer stands with Fernald Engineers Ron Shaw, David Beck and Barb Hamblin as the first rail shipment from the Waste Pits Remedial Action Project leaves the site (6944-D0746).*

*Far right: Dry spring conditions have been ideal for clay screening operations. The clay will be used to construct the OSDF liner (6319-D1896).*



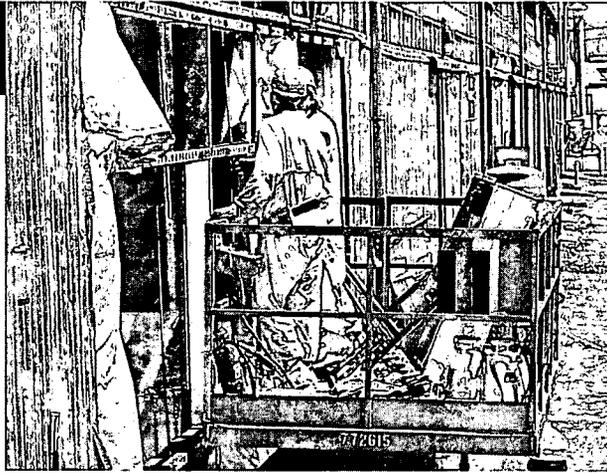
## Operations

### Facilities Shutdown

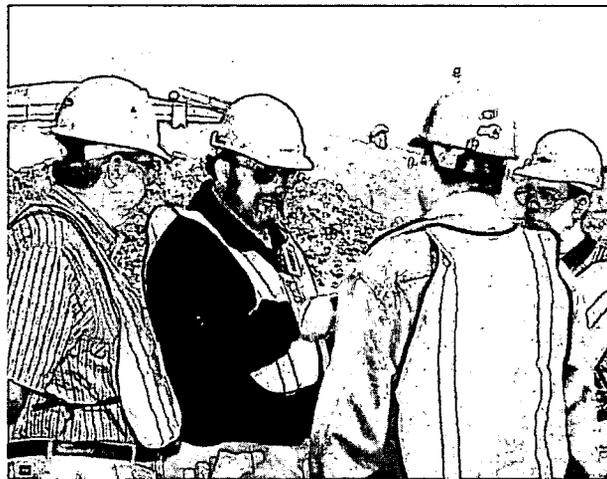
- Completed shutdown activities on West and East Pipe Bridges
- Completed shutdown activities in Building 12 and issued turnover package

### Demolition Projects

- Thorium/Plant 9 Complex —
  - ◇ Issued Project Closeout Report
- Plant 5 Complex —
  - ◇ Awarded D&D contract to MACTEC, Inc., on April 22, 1999
- Maintenance/Tank Farm Complex and Water Storage Tank Project —
  - ◇ Completed D&D of Tank Farm
  - ◇ Continued construction of new Water Storage Tank
- Facility Demolition/Supplemental Environmental Projects —
  - ◇ Completed shipment of 99 boxes of copper motor windings to DOE-Oak Ridge for recycling; total of 1,414 tons shipped
  - ◇ Issued D&D Implementation Plans for Plant 5 and Plant 6



*Left: NSC personnel spray transite panels with a fixative prior to removing them from the sides of Maintenance Building. The fixative is used to lock-in any contamination and friable asbestos on the panels (7118-D0018).*

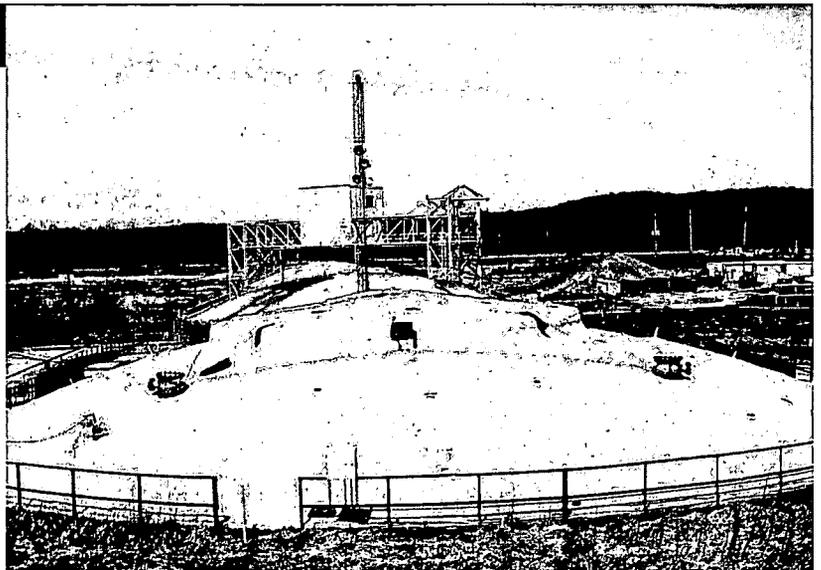


*Below left: Silos Project engineers recently conducted a series of stress tests on the silo domes and found them to be structurally sound (6971-D0039).*

*Below: There are close to 900 cubic yards of waste in Silos 1 and 2. It would take 90 gondola cars to hold that much waste (7098-D0077).*

## Silos Project

- Finalized *Project Management Plan and Quality Assurance Plan* for Silo 3 Project
- Staver Group continued road and electrical upgrades as part of the Silos Infrastructure Project
- Commented on *draft Proof-of-Principle Testing* reports from contractors and began reviewing comment responses from vendors



# Cleanup Progress Update

## Aquifer Restoration/ Wastewater Project

- Continued construction of Sludge Removal System at Stormwater Retention Basin and Biosurge Lagoon; activity is approximately 50% complete
- Completed construction of Ozone Injection System at Stormwater Retention Basin and Biosurge Lagoon
- Initiated construction of Stormwater Retention Basin drainage area improvements
- Completed demolition of existing Advanced Wastewater Treatment Laboratory to support Lab Expansion Project; awarded construction contract to C-Force Construction on April 5, 1999



*Top:*

Work is well underway on a 400,000 gallon water storage tank that will replace the water towers and old 750,000 gallon tank (7014-D0063).

*Center:*

After one year, the erosion control measures taken along Paddys Run are working as planned. Prior to stabilization, about 10 feet a year was sliding into the waterway (6690-D0281).



*Right:*

Community Outreach Coordinator Sue Walpole points out the final product as students from Ross Middle School helped plant wild flowers in the Eco Park (7110-D0008).

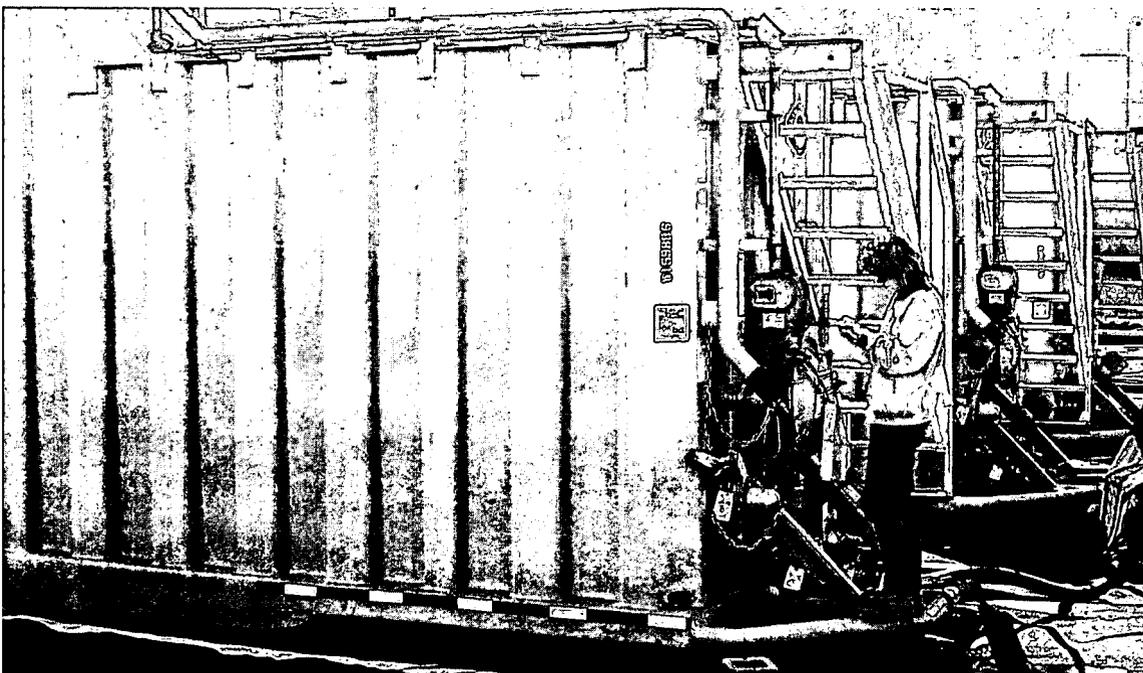


## Soil Characterization & Excavation Project

- Area 2 Phase I — Southern Waste Units
  - ◆ Performed additional excavation and RTRAK (Radiation Tracking System) scanning within Inactive Flyash Pile
- Area 1 Phase II — Southern Portion of East Field
  - ◆ Continued treatability study associated with Trap Range Stabilization subcontract
  - ◆ Completed Site Preparation Package
  - ◆ Submitted Certification Design Letter for North Area of Area 1 Phase II (Cell 3); began collecting samples
- Natural Resource Restoration
  - ◆ Issued DOE Finding of No Significant Impact and Responsiveness Summary on Environmental Assessment for Final Land Use at the FEMP
  - ◆ Initiated construction of Wetland Mitigation Project

## Waste Management Projects

- Thorium Legacy Waste Project —
  - ◇ Repackaged 30 boxes of low level waste for shipment to the Nevada Test Site
  - ◇ Segregated 13 boxes of mixed waste for storage and treatment
  - ◇ Repackaged a total of 242 boxes and segregated approximately 52 boxes
- Nuclear Materials Disposition —
  - ◇ Continued repackaging approximately 14,500 10-gallon cans of depleted uranium tetrafluoride (UF<sub>4</sub>) for shipment to DOE-Oak Ridge
  - ◇ Repackaged a total of 218 of an estimated 540 boxes
- Liquid Mixed Waste Project —
  - ◇ Completed four shipments of Batch 7 mixed waste (consisting of 19,000+ gallons) to the Toxic Substance Control Act (TSCA) Incinerator at Oak Ridge, Tenn.

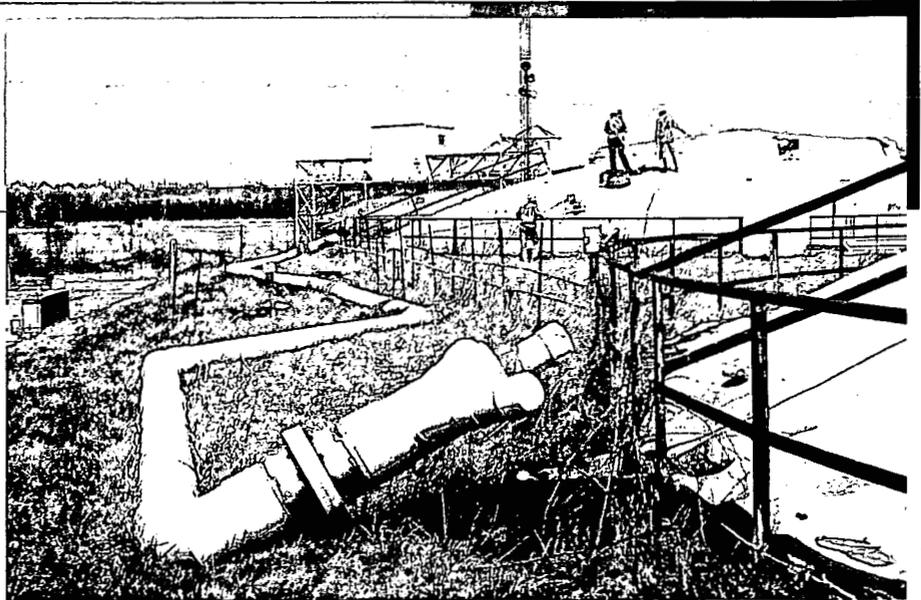


*Above:*  
 Hazardous Waste Workers Brian Green (left) and Ed Collett put on personal protective equipment as they prepare to transfer waste from a batch container into a tanker. Once the transfer is complete, the tanker will be shipped to the TSCA Incinerator in Oak Ridge, Tenn. (6898-D0055).

*Left:*  
 Fluor Daniel Fernald Project Engineer Amy Brocker follows her pre-op checklist before starting transfer operations from the 20,000 gallon tank (6898-D0046).

## Record of Decision process continues

The path forward for treating Silos 1 and 2 includes a formal reevaluation of the selected remedy—vitrification—with stakeholders and regulators. This process, known as a Record of Decision (ROD) amendment, is ongoing. Four vendors — Envitco, Vortec, International Technology Corp. and Chem-Nuclear — were awarded contracts to conduct Proof-of-Principle tests and demonstrate its ability to continuously operate the technologies they have proposed for the remediation of Silos 1 and 2. All demonstration tests were completed in January 1999. Each of the four vendors presented its testing results to the appropriate Fernald management during the first week of May. These presentations included process challenges, assumptions, lessons learned and a conceptual look at the vendors' proposed full-scale treatment facilities. Reports with these results will be available for public review and comment in July 1999. The results from these tests will be used in the detailed analysis of the alternatives and included in a revised *Silos 1 and 2 Feasibility Study Report and Proposed Plan*, which will be submitted to the U.S. Environmental Protection Agency in 2000.



*Above: When the Record of Decision amendment is complete and the final cleanup remedy for Silos 1 and 2 is chosen, a vendor will be selected to perform full-scale remediation (7098-D0028).*



## Carlos Tellez joins Fernald staff

Don't be surprised to see a new face at some of Fernald's public meetings. Carlos Tellez has been appointed as the new Vice President of Fernald's Waste Management Project. Tellez joins the Fernald staff from Lockheed Martin Idaho Technologies Company where he served as the Director of Environmental Affairs. He has a Bachelor of Science degree in Mechanical Engineering from Stanford University and a Masters degree in Public Policy from Harvard University. Tellez has 17 years of work experience in government and industry.

*Left: Under Tellez's direction, Waste Management personnel will safely dispose of 10 million pounds of nuclear materials and 10.5 million cubic feet of hazardous, mixed, and low-level radioactive waste (7099-D0003).*

## Eco Park comes alive

**O**n two beautiful days in April, students from Crosby Elementary and Ross Middle School planted native wildflowers hoping to leave behind a colorful legacy.

The project is part of the restoration work at Fernald. Students are looking forward to coming back to the park in the years to come and teachers see it as an excellent hands-on teaching opportunity.

"Through active participation, students will get an appreciation of how to turn land back to a natural state. These kids will remember this," said Al Gross, sixth grade teacher at Ross Middle School.

In addition to the small public access park, there will also be a tall grass prairie and an expanded forest. As the buildings come down in the former process area, restoration at other sites will begin.

*Below: Students from Ross Middle School are encouraged as they plant wildflowers at Eco Park on Paddys Run Road (7110-D0010).*



## One Earth...One Chance

**E**very year cities around the country organize events to recognize on-going efforts both nationally and locally that carry the message of working together to preserve the planet's health. Cincinnati celebrated Earth Day on April 24 at Sawyer Point with music, exhibits, a fashion show, awards ceremony and a tree planting. The Fernald site was one of many environmental exhibits at the event sponsored by the Greater Cincinnati Earth Coalition.

*Left: Young volunteers concentrate as they color earth-friendly messages on grocery bags that will be reused by store patrons. This was one of the activities at the Fernald display during the Earth Day celebration (7115-D0018).*

## Final land use approved

**A**fter an extensive public review process, DOE has approved the final land use proposal for Fernald, which involves restoring natural resources over most of the 1,050 acre site.

"We're satisfied with the proposal because it is consistent with recommendations we've received from the public, regulators and the Fernald Natural Resource Trustees," said Johnny Reising, DOE associate director, Environmental Management. "It's a major step toward resolving the State of Ohio's 1986 claim against DOE for natural resource injury. It also satisfies wetland mitigation requirements, and reserves a 23-acre parcel of land for potential economic development."

Under this proposal, the site will be maintained under federal ownership, which includes monitoring and maintenance of the On-Site Disposal Facility. The projected cost of the natural resource restoration is approximately \$13 million over a 10-year period.

The proposal is outlined in the *final Environmental Assessment for the Proposed Final Land Use at the Fernald Environmental Management Project (EA)*. DOE also has issued a *Finding of No Significant Impact (FONSI)*, a regulatory document required by the National Environmental Policy Act (NEPA) that justifies why an extensive and costly Environmental Impact Statement is not required.

By early June, DOE will place the EA, FONSI and responses to public comments in the Public Environmental Information Center and on Fernald's Web site at ([www.fernald.gov](http://www.fernald.gov)).



*Above: DOE is currently restoring several acres of wetlands to replace wetlands damaged or destroyed during site cleanup activities (7081-D0022).*



## United Way applauds program

*Left: Bob Fluor, president of the Fluor Foundation and Suzanne Esber, director of Community Affairs, applaud during the United Way's Spirit of America Awards Program held April 17 in downtown Cincinnati. Seen in the foreground is the Summit Award, presented to Fluor Corporation for its longstanding dedication and commitment to community involvement (7107-D0013).*

## Recent Tours

**P**rofessor Rakoven from Miami University brought his geology class to Fernald to see the soil and water remediation activities in action.

*Right: As part of their visit, the class toured the Advanced Wastewater Treatment facility. Fluor Daniel Fernald Chemical Engineer, Cathy Glassmeyer, explained how the facility treats the groundwater and wastewater before releasing it to the river (6810-D1096).*



**F**or the past several years, Professor Roger Blanchard has included a trip to Fernald as part of the course for his environmental chemistry class from Northern Kentucky University. "When you tour the site every year, you can really see the progress that is being made here," said Blanchard.

*Left: Because of their interest in chemistry, Frank Miller, Fluor Daniel Fernald Analytical Chemist, took the group on a tour of the on-site laboratory facility. He explained how samples are analyzed and showed them a variety of instrumentation (6810-D0199).*

**A** Safety Management Implementation Team visited for several days in April to talk about Fernald's Integrated Safety Management (ISM) Program. ISM is a DOE initiative that integrates safety into all facets of work planning and execution (6810-D0198).



## 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
  - ◇ U.S. EPA approval of the Final Operable Unit 1 First Loadout Remedial Action Work Plan
  - ◇ Operable Unit 1 Storm Water Management Pond Analytical Data to Support the National Pollutant Discharge Elimination System Permit Renewal Application
- Soil Characterization & Excavation Project
  - ◇ On-Site Disposal Facility Cell 2 Construction Quality Assurance Final Report
  - ◇ Ohio Environmental Protection Agency approval of the Construction Quality Assurance Final Report for the On-Site Disposal Facility Phase II, Cell 2
  - ◇ U.S. EPA approval of the Area 2, Phase III Project Specific Plan
  - ◇ Project Specific Plan for the Sampling of Removal Action 17, Stockpiles 1, 2, and 4 for the On-Site Disposal Facility Waste Acceptance Criteria
  - ◇ Draft Operable Unit 2 South Field Firing Range Remediation Approach and Fact Sheet
  - ◇ U.S. EPA Approval of the Area 2, Phase I South Field Excavation Characterization
  - ◇ Project Specific Plan for Area 9, Phase I Precertification Physical Sampling (Revised)
  - ◇ Ohio EPA approval of the Project Specific Plan for Area 9, Phase I Precertification Physical Sampling and Real-Time Scanning
  - ◇ Verification of Treatment Sampling Plan for Area 1, Phase II Trap Range Stabilization
  - ◇ Project Specific Plan for Area 1, Phase II Excavation Monitoring and Precertification Soil Characterization Excavation Project
  - ◇ Remedial Design Fact Sheet for Operable Unit 2 - Area 2, Phase I Southern Waste Units South Field Firing Range
  - ◇ Ohio EPA Approval of the South Field Firing Range Remediation Approach
  - ◇ Ohio EPA Approval of the Project Specific Plan for Area 2, Phase I of the South Field Excavation Characterization
  - ◇ Evaluation of Leachate Transmission System for the On-Site Disposal Facility prepared by Geosyntec Consultants
- Facilities Closure and Demolition Project
  - ◇ Operable Unit 3 Project Completion Report for the Thorium/Plant 9 Complex
  - ◇ Operable Unit 3 Plant 5 Complex Implementation Plan for Above-Grade Decontamination and Dismantlement
- Silos Project
  - ◇ U.S. EPA approval of the Silo 3 Project Remedial Design Deliverables Schedule
- Aquifer Restoration Project
  - ◇ Combined Technical Specifications for the remediation of Area 1, Phase II Sewage Treatment Plant Excavation Package (includes drawings)
  - ◇ January 1999 Operating Report for the Re-Injection Demonstration
  - ◇ Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Project
  - ◇ On-Site Disposal Facility Leachate Conveyance System Leak Investigation Report Gravity Line Section
- Miscellaneous
  - ◇ Draft Wetland Mitigation Plan for Area 1
  - ◇ Approval from the U.S. EPA on the Area 1, Phase I Wetland Mitigation Design
  - ◇ Final Integrated Environmental Monitoring Status Report for the fourth quarter of 1998
  - ◇ Environmental Assessment for the DOE, Oak Ridge Operations Receipt and Storage of Uranium Materials from the Fernald site
  - ◇ Information from the Fernald Cleanup Progress Briefing held in April 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](mailto:gary_stegner@fernald.gov)  
Fernald Web Site: [www.fernald.gov](http://www.fernald.gov)