

Fernald Report

2187

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April 1999



Marking the completion of Safe Shutdown

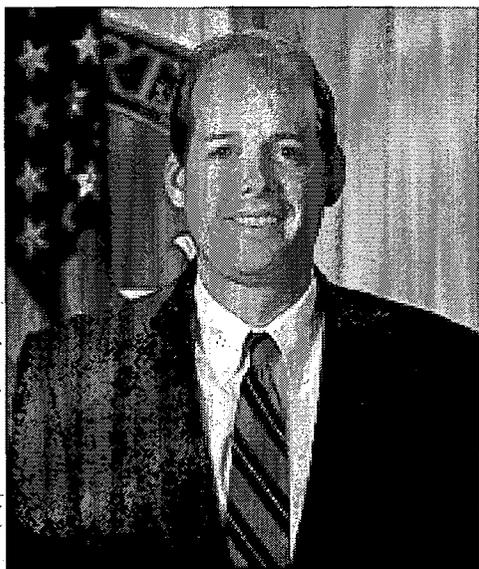
March 22, 1999 was a significant day at the Fernald Environmental Management Project for many reasons. It was an opportunity for employees and stakeholders to recognize the individuals responsible for completing the safe shutdown of our production buildings, a project completed years ahead of schedule and millions of dollars under budget. This achievement was so significant that it prompted a visit by Secretary of Energy Bill Richardson to commemorate the milestone. This is the first time a Secretary of Energy has visited Fernald.

At a ceremony held in Plant 6 to mark the occasion, the Secretary said, "Fernald has developed a reputation as a leader in environmental restoration. You're out front in key areas that make a difference in restoring America's land to its original state including safety, working together with organized labor, regulators and stakeholders to plan and implement successful performance and getting the work done in the field. You are doing so through example, making outstanding progress and creating a safe workplace." Those remarks were echoed by Fluor Chairman and CEO, Phil Carroll; John Meese, president of the Metal Trades Department, AFL-CIO; and by Chris Jones, director of the Ohio Environmental Protection Agency.

Prior to the event, the Secretary had an opportunity to tour the site and talk one-on-one with employees, labor representatives and Fernald neighbors. He walked away from this site well aware of the teamwork and firm commitment to safety that we share in getting the job done at Fernald.

March 22 was truly a landmark day in the history of our site. But I am confident that the success of projects like Safe Shutdown will continue to be repeated as we take down more buildings, treat the aquifer and excavate our waste pits.

I would personally like to invite you to come to Fernald and see the work that has taken place during the past year. On May 11, at 6:00 p.m., we will be offering a bus tour of the site instead of our usual Cleanup Progress Briefing. This is a good opportunity to see the work up close, get the latest information and ask questions. You will also have a chance to get off the bus at the Waste Pits Project to see the waste handling facilities and rail operations up close. Please plan to attend.



Jack Craig
 Jack Craig
 Director, DOE-Fernald

On the cover: On March 22, 1999 Secretary Richardson praised Fernald employees and stakeholders for their teamwork (7084-20).

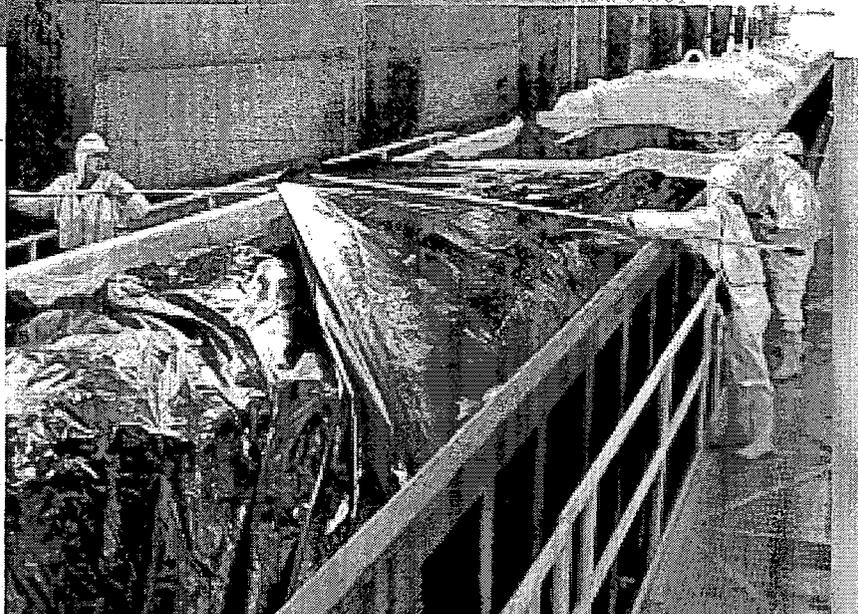
Moving on

The drums are filled, the equipment is empty and the buildings are ready for demolition. Now that Safe Shutdown is complete, what are the employees who made that goal a reality doing?

Of the approximately 130 employees assigned to the project over the last six years, only 12 remain focused on Facilities Shutdown, an effort that will prepare the site's non-nuclear facilities for demolition. Facilities Shutdown is expected to take about three years to complete.

The majority of the hazardous waste workers have been reassigned to the Waste Pits Project, taking their commitment to safety with them. Most of the project's craft personnel are now working in the Maintenance Department.

"As Safe Shutdown was ramping down, other important projects, like the Waste Pits, were ramping up," said Jerry Boeckman, a former member of the Safe Shutdown team. "It's a natural progression as we continue to move forward with the site cleanup."



Above: Former Safe Shutdown employees are now helping other projects complete their cleanup missions (6944D-642).



Fernald set to begin rail shipments

After years of planning and construction, the Waste Pits Project is ready to ship the first train of material to Envirocare of Utah in late April.

"We're just beginning to scratch the surface of this project," said Dave Lojek, DOE Waste Pits Project manager. "Over the next several months, we'll focus on achieving a safe, steady state of operation for all the phases of the project, including waste pit excavation, treatment, transportation and disposal."

The first few trains will contain about 40 to 50 railcars of contaminated soil associated with the Waste Pits Project. The current plan is to ship one train every three to four weeks through 2004. As one train is being loaded in the Railcar Loadout Facility, a second train will leave Fernald for the 1,900-mile trip to Envirocare and a third train will be at Envirocare for disposal.

Later this summer, IT Corp. will begin excavating the pit area and operating the treatment facilities, including two rotary dryers. Fernald estimates that about 626,000 tons of material will be shipped to Envirocare over the next five years.

Left: Waste is placed in bins prior to railcar loading. Each bin holds over 500 tons, enough material for five or six railcars (6944-D0655).

Cleanup **Progress** Update

Waste Pits Remedial Action Project (WPRAP)

- Continued loading waste into railcars, filled 40 as of April 5, 1999
- Continued preparations for first unit train shipment
- Continued building remaining waste processing facilities

On-Site Disposal Facility (OSDF)

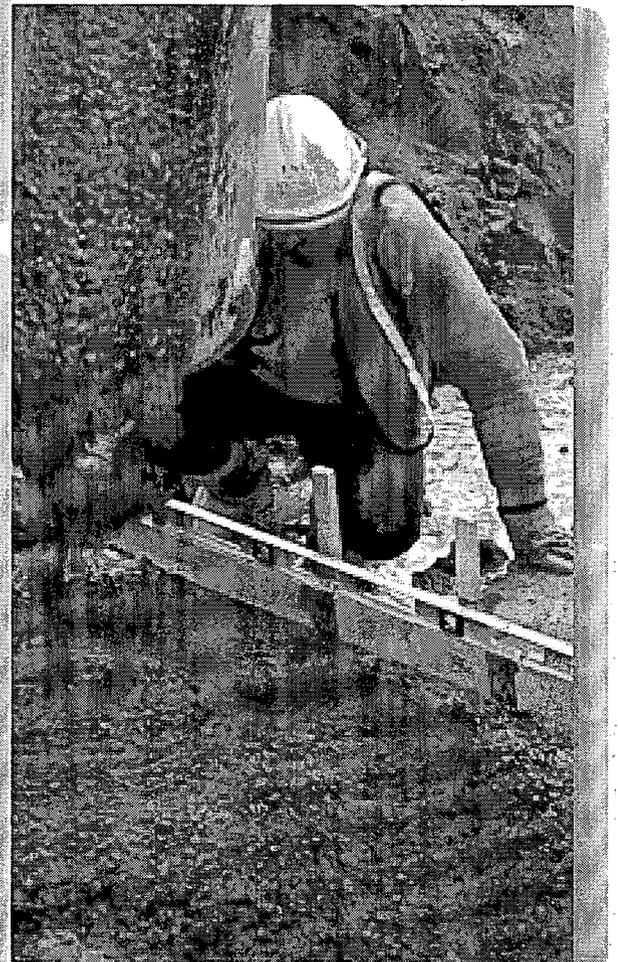
- Continued to assemble Leachate Analysis Report



Above: While waste loading is taking place, construction is also moving ahead on the waste dryers and associated off-gas system (6944-D0642).

Right: About 22,000 tons of impacted soil from the first of two construction piles are being sifted and carried by conveyor to the Material Handling Building (6944-D0619).

Far right: Workers pour concrete in the OSDF Borrow Area to help reinforce the out-fall line from the Advanced Wastewater Treatment Facility. This work helps support Trap Range and Sewage Treatment Plant demolition (6319-D1885).



Facilities Closure & Demolition Project (FC&DP)

Facilities Shutdown

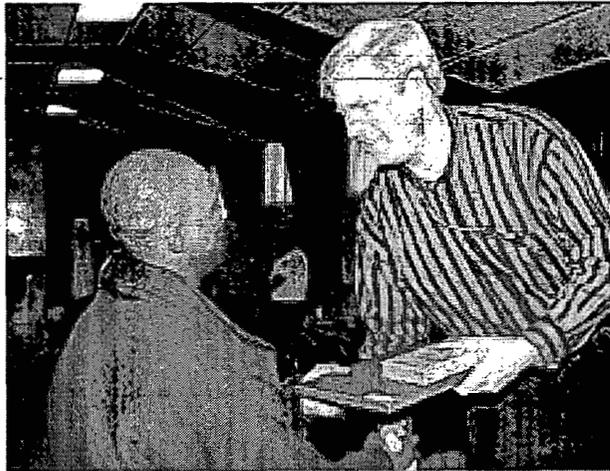
- Completed Safe Shutdown activities in Plant 6
- Continued Plant 12 facilities shutdown

Decontamination & Dismantlement

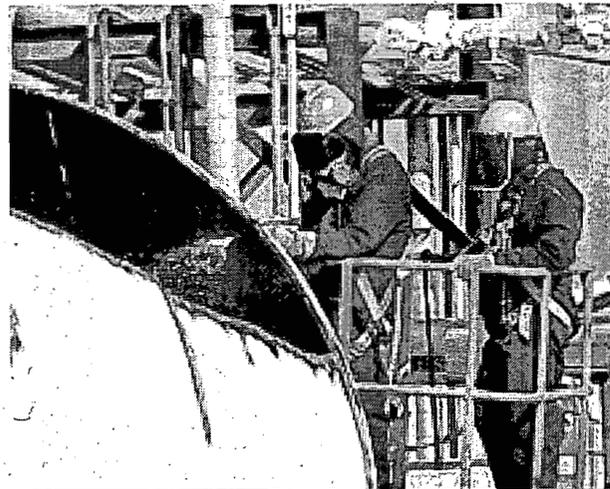
- Thorium/Plant 9 Complex —
 - ◆ Continued preparation of Project Closeout Report
- Plant 5 Complex —
 - ◆ Received notification of D&D Implementation Plan regulatory approval
- Maintenance/Tank Farm Complex and Water Storage Tank Project —
 - ◆ Continued D&D of Tank Farm and Pipe Bridge components
 - ◆ Began construction of new Water Storage Tank
- Facility Demolition/Supplemental Environmental Projects —
 - ◆ Continued shipping boxes of copper motor windings to DOE-Oak Ridge for recycling
 - ◆ 87 boxes shipped

Silos Project

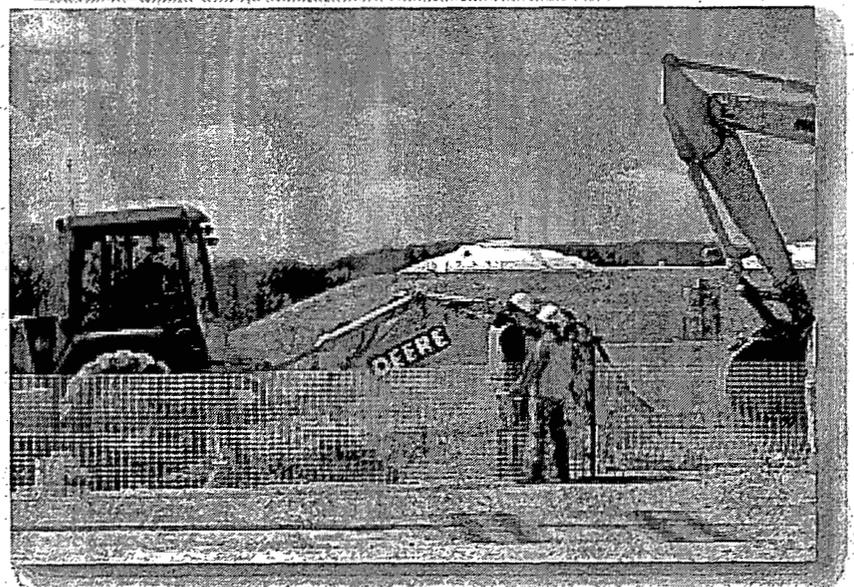
- Submitted Silo 3 Remedial Design Deliverables Schedule to regulatory agencies for approval
- Issued Notice to Proceed to Foster Wheeler Environmental for Silos 1 and 2 Accelerated Waste Retrieval Project
- Staver Group began construction of Roads and Electrical Upgrades portion of Silos Infrastructure Project
- Began reviewing draft Proof-of-Principle Testing reports from contractors



Left: Safe Shutdown team members were recognized for their outstanding work at a luncheon and project review meeting. John Trygier, DOE project manager (right), presents a framed photo and project highlights tape (7080-D0007).



Below left: NSC crews cut apart an empty processing tank. Approximately 31 tons of steel from the Tank Farm demolition will be recycled (7025-D0059).



Below: Upgrades to the Silos Project infrastructure include a new roadway which will be completed by mid-July (6971-D0015).

Cleanup **Progress** Update



Top:
John Deho and Bob Minges use a GEO Probe to sample groundwater where a well did not previously exist. This data is used to give Fernald scientists a better vertical profile of aquifer contamination (6860-D0049).

Center:
Environmental Technician Doug Gels pulls a groundwater sample as part of routine monitoring in support of aquifer restoration (6860-D0045).



Right:
Survey crews prepare for more work near the Storm Water Retention Basin (7086-D0003).



Aquifer Restoration/ Wastewater Project

- Issued final design for Stormwater Retention Basin portion of Sludge Removal System and began construction
- Resumed construction of Biosurge Lagoon Ozone Injection System
- Continued construction of Bionitrification Bypass Project
- Began demolition of existing Advanced Wastewater Treatment Laboratory to support Lab Expansion Project
- Initiated Sludge Removal System construction at Biosurge Lagoon

Soil Characterization & Excavation Project

- Area 1 Phase II — Southern Portion of East Field
 - ◆ Completed treatability study associated with Trap Range Stabilization subcontract
 - ◆ Negotiated contract with Petro Environmental Services for Sewage Treatment Plant Excavation and revised construction documents to incorporate required changes
 - ◆ Completed sediment basin work associated with Site Preparation Package
- Area 2 Phase III — South Central Portion of the Fernald Site
 - ◆ Completed precertification activities; issued Certification Design Letter and Certification Sampling Project Specific Plan to regulatory agencies
- Natural Resource Restoration
 - ◆ Held first meeting of the Natural Resource Working Group on March 11, approved wetland mitigation design
 - ◆ Installed fencing on Identification and Control of Invasive Species Project plots and planted seedlings

Waste Management Projects

■ Thorium Legacy Waste Project —

- ◆ Repackaged 50 boxes of low-level waste for shipment to Nevada Test Site
- ◆ Segregated 39 boxes of mixed waste for treatment
- ◆ 212 boxes repackaged

■ Nuclear Materials Disposition —

- ◆ Continued repackaging 14,500 10-gallon cans of depleted uranium tetrafluoride (UF₄) for shipment to DOE-Portsmouth Gaseous Diffusion Plant
- ◆ 148 out of an estimated 500 boxes have been repackaged



*Above:
Hazardous Waste Worker
Billie Wiggins reviews the
packing list of 10-gallon
cans of uranium
tetrafluoride (UF₄) being
packaged for shipment to
DOE's Portsmouth facility
(6731-D0081).*

*Left:
Each box of product
slated for shipment to
Oak Ridge contains
approximately 9,000
pounds of former product
(6731-D0091).*

Status of the Leachate Transmission System

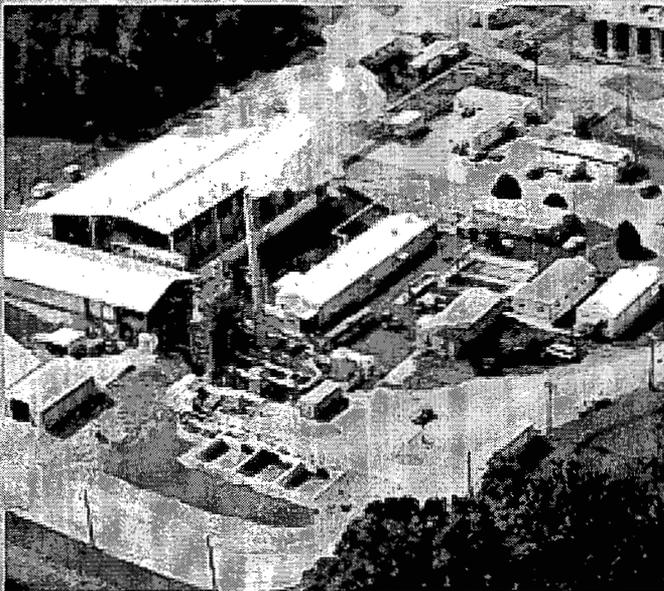
As reported last month, several leaks were discovered in the line that carries water from the On-Site Disposal Facility (OSDF) to the wastewater treatment plant. The leachate, rainwater that percolates through waste, was found during a routine inspection in a manhole that should be dry. Waste placement was immediately halted and an engineering task team was assembled to analyze the situation. DOE, Fluor Daniel Fernald and regulators are working to identify the leaks, as well as their cause and take the appropriate steps necessary to get the system fully operational by June. The Leachate System Analysis Report is available at the Public Environmental Information Center, 648-7480.

When the 3600-foot leachate line (two pipes, a six-inch carrier inside a ten-inch containment pipe) was installed, 2800 feet of the line was considered temporary and would be replaced as more cells were added; 800 feet of the line was permanent. Current plans are to install a continuous, jointless slip line in the six-inch carrier pipe of the 800-foot permanent line. A double-walled temporary above-grade line will replace the current 2800-foot line until the permanent replacement pipe can be installed.

DOE and Fluor Daniel Fernald are committed to an expeditious review of the design as well as the installation and testing protocols for the entire leachate line. Based on the results of this review, Fluor Daniel Fernald will incorporate the information and lessons learned into the design and construction of the permanent leachate line. Work on the new line will begin by the end of the year.



Above: The inner 6-inch carrier pipe is the line through which the leachate is designed to flow to treatment. The outer containment pipe is designed to hold the leachate should the carrier pipe fail (6319-D1784).



Above: All 20,000 gallons of Fernald's Batch 7 Liquid Mixed Waste is expected to be shipped off-site by mid-May to the TSCA Incinerator in Oak Ridge, TN (6836-2).

Batch 7 sent to Oak Ridge

Over the last several years, Fernald's Liquid Mixed Waste Project has prepared and shipped six batches of waste off site for treatment. Incineration is the method for treating this waste which contains various types of organics. Currently, liquid mixed waste from Fernald is being treated at the Toxic Substance Control Act (TSCA) Incinerator at DOE's facility in Oak Ridge, TN.

Several steps must occur prior to safely treating liquid waste. First, the content of the waste must be identified. Individual waste streams are analyzed and placed into different batches based on the value of the material and its compatibility with other waste streams. Each batch is stored in 20,000-gallon holding tanks. Batches are then sampled by representatives from the Oak Ridge TSCA Incinerator and results are reviewed and approved by both Oak Ridge and the State of Tennessee. Upon approval, representatives from Fernald pick up a DOE-owned tanker from Oak Ridge and deliver it to the site where it is filled from the approved batch/tank and sent back for off-loading and incineration. In most cases, five or six tankers of waste are needed to send an entire batch to the incinerator.

Fernald supports Olympic movement

As you may have heard or read, Cincinnati is one of eight cities in the running for the 2012 Summer Olympics. Cincinnati 2012, a non-profit organization that includes hundreds of business leaders throughout the Greater Cincinnati area, is responsible for submitting Cincinnati's bid for hosting the 2012 Games to the United States Olympic Committee by next March.

Fernald is one of several businesses Nick Vehr, Cincinnati 2012 president, has visited to explain future plans and seek support for bringing the Olympics to Cincinnati. Several employees from Fernald have volunteered to help by serving on various committees established to develop the bid.

Left: The summer before the Atlanta Games, several Fernald stakeholders had the honor of carrying the torch as it made its way through Cincinnati (6392-13).



Fluor Corp restructures

In March, Fluor Chairman and CEO Phil Carroll announced a major restructuring and new strategic direction within the corporation. Within the new strategic plan, Fluor Corp. will be organized into four business groups, each reporting to Carroll: Fluor Daniel, the company's engineering, procurement and construction business; A.T. Massey Coal Company; Fluor Global Services; and Shared Services. Fluor Daniel Fernald, once under the Fluor Daniel umbrella of companies, is now positioned within Fluor Global Services headed by Jim Stein. Ron Peterson will continue to lead Government Services under this new organization.

"We will continue to serve the Department of Energy through superior performance in our existing contracts and we will look closely at new opportunities as they become available at other Energy sites," Carroll said.

Right: Following the Safe Shutdown ceremony in Plant 6, Fluor Corp. Chairman and CEO, Phil Carroll got a chance to tour the facility and talk to team members. Brian Howard (left), Safe Shutdown operations manager, described the work that was necessary to put the building in a safe condition for dismantling (7084-54).





Fernald celebrates Women's History Month

The theme "Women Putting Our Stamp on America" honored women who made their mark on history. Theresa Adair, director, Continuum of Care Services for the YWCA of Greater Cincinnati spoke to Fernald team members about the way in which the YWCA services respond to the changing needs of women and the impact of violence against women.

A range of patterns, stitches, and colors were displayed by team members as a way of celebrating the art of quilting. Kathy Rhodus (left) and Doris Edwards (standing) were among the team members who admired the talents of the stitching artists.



FCAB

The Fernald Citizens Advisory Board will host a Transportation Workshop for Site-Specific Advisory Boards (SSABs) across the nation, May 20-23, 1999, at the Vernon Manor Hotel in Cincinnati, Ohio. This workshop is designed for SSAB members who are actively involved in the remediation of DOE sites and will seek to:

- Improve understanding of transportation related issues and decision-making processes
- Foster dialogue among SSAB members about national transportation issues and create opportunities for continuing that dialogue
- Identify joint issues/concerns, and begin drafting joint recommendations for their resolution

For more information on the workshop contact Gwen Doddy (513) 648-6478.

Recent Tours

On March 15, the Subsurface Contaminants Focus Area (SCFA), a part of DOE's Office of Science & Technology, spent the day discussing Fernald technology needs and took a site tour. Current SCFA programs at Fernald include the Aquifer Re-injection Project and Real-Time Radiological Monitoring (6810-D192).



When Energy Secretary Bill Richardson came to Fernald in March, he viewed a number of key remediation projects during his visit. Leah Dever, director, Ohio Field Office, and Jack Craig, director, DOE Fernald, accompanied Mr. Richardson on the tour; Johnny Reising, associate director at Fernald was the tour spokesman.

Left: Along the route Secretary Richardson stopped off at the Plant 1 Pad and talked to Waste Management team members about their work (7084-D110).

The Crosby Township Trustees remain committed to all public involvement opportunities at Fernald. They have representation on the Cooperative, Planning and Training Committee, the Living History Project, the Community Reuse Organization, and the Fernald Citizens Advisory Board. This was the 14th year that the trustees have toured the site.

Right: From left to right: Jim Harper, Jane Harper, trustee; Melba Guard, trustee; Barb Storer, and Gary Storer, trustee (6810-D194).



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):

- U.S. EPA Approval of the Waste Acceptance Criteria (WAC) Attainment Plan for the On-Site Disposal Facility
- Waste Pits Project (WPRAP) Remedial Action Package
- U.S. EPA Approval of the Construction Quality Assurance Report for the On-site Disposal Facility Report
- Draft Maintenance/Tank Farm Complex Implementation Plan for Above-grade Decontamination and Dismantlement --This plan represents the solid design documentation required for the combined Tank Farm and Maintenance Complexes project and fulfills regulatory milestones for submittal of separate Implementation Plans for the Tank Farm and Maintenance Complexes, as defined in the Operable Unit 3 Integrated Remedial Design/Remedial Action Work Plan (May 1997)
- Implementation Plan for Above-Grade Decontamination and Dismantlement of the Sewage Treatment Plant Complex --
This Implementation Plan represents the Remedial Design documentation for the above-grade decontamination and dismantlement of the Sewage Treatment Plant Complex. The project implementation details contained in this document elaborate, as applicable, on programmatic strategies presented in the Operable Unit 3 Integrated Remedial Design/Remedial Action Work Plan Above-Grade D&D strategies developed for the site support contractor's scope of work, and project work scope conditions specifications developed for this project
- Documentation from the following public meetings and workshops:
 - ◆ Silos Project Public Involvement Workshop held March 4
- Restoration Area Verification Sampling Program Summary Report - This summary report presents and interprets groundwater data collected to evaluate if final remediation levels could exceed outside the uranium-based groundwater remediation footprint. It also provides a recommendation about whether the modification of uranium based aquifer remedy is warranted at this time based on the sampling results
- 1997 Resource Conservation and Recovery Act Annual Hazardous



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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
Fernald Web Site: www.fernald.gov