4616

fernald Report

Inside

- Committed to "SAFE" closure
- Wow-what a relief!
- Over the top by $35,000.

Nov/Dec 2002

100000

message from
Steve McCracken

SAFETY FIRST – Safety Always

As many of you know, the challenges facing workers at a DOE Environmental Management cleanup site are much like those facing construction workers at any job site in the U.S. However, factors including hazardous chemicals, radioactive contamination and asbestos hazards make for more demanding working conditions and the need for greater training, knowledge and skill on the part of our workers. When you combine these elements, you have a challenging job even under the best of conditions.

This past year hasn't been our best year for safety. In January, a worker slipped on an icy ramp outside a trailer. The fall broke his femur, requiring a lengthy recovery and rehabilitation period and ending a safe work record of 1,043 days or 10.4 million hours without a lost-time accident. In another case a worker in the garage tore a ligament in his knee while bending down to pickup a bolt. The injury required surgery and was our second lost-time accident this year. And we had a security guard catch her foot on the threshold of a door, fell forward and broke her arm. These weren't the only incidents in 2002 but this is the way the year has played out. Some have argued that as work increases so too will the injury rate. I don't buy that. More activity can certainly increase the potential for more injuries. For this reason we must be more diligent than ever before.

To respond to the increase in accidents, Fluor Fernald management has concentrated on refocusing energy behind the Safety First work groups. Each employee is a member of a work group with 6 or more co-workers. The purpose of Safety First is to find ways to make work safer, starting with ideas from employees. Using the five core functions of Integrated Safety Management has helped to refocus our belief that anything can happen at any time:

- ☐ Define the Scope of Work
- ☐ Analyze the Hazards
- ☐ Develop and Implement Hazard Control
- ☐ Perform Work within Controls
- ☐ Provide Feedback and Continuous Improvement

The responsibility for safety and ultimately our success as a cleanup project rests squarely in the hands of our work force. In an industry such as construction, where 1,200 workers die each year according to U.S. Labor Department statistics, even one lost-time injury at Fernald is unacceptable. I am confident that our workforce, with the help of their Safety First Teams, can refocuse their minds and bodies on safety. As we have found out it's often the routine, the mundane, that little distraction, that can lead to serious consequences. We must not let our guard down for even an instant. Only then will "Safe Closure in 2006" be a reality.

Steve McCracken
Director, DOE-Fernald

On the cover: *A technician monitors the breathing air trailer, which was used to support the installation of the pressure relief valves on Silos 1 and 2 (7385-d2160).*

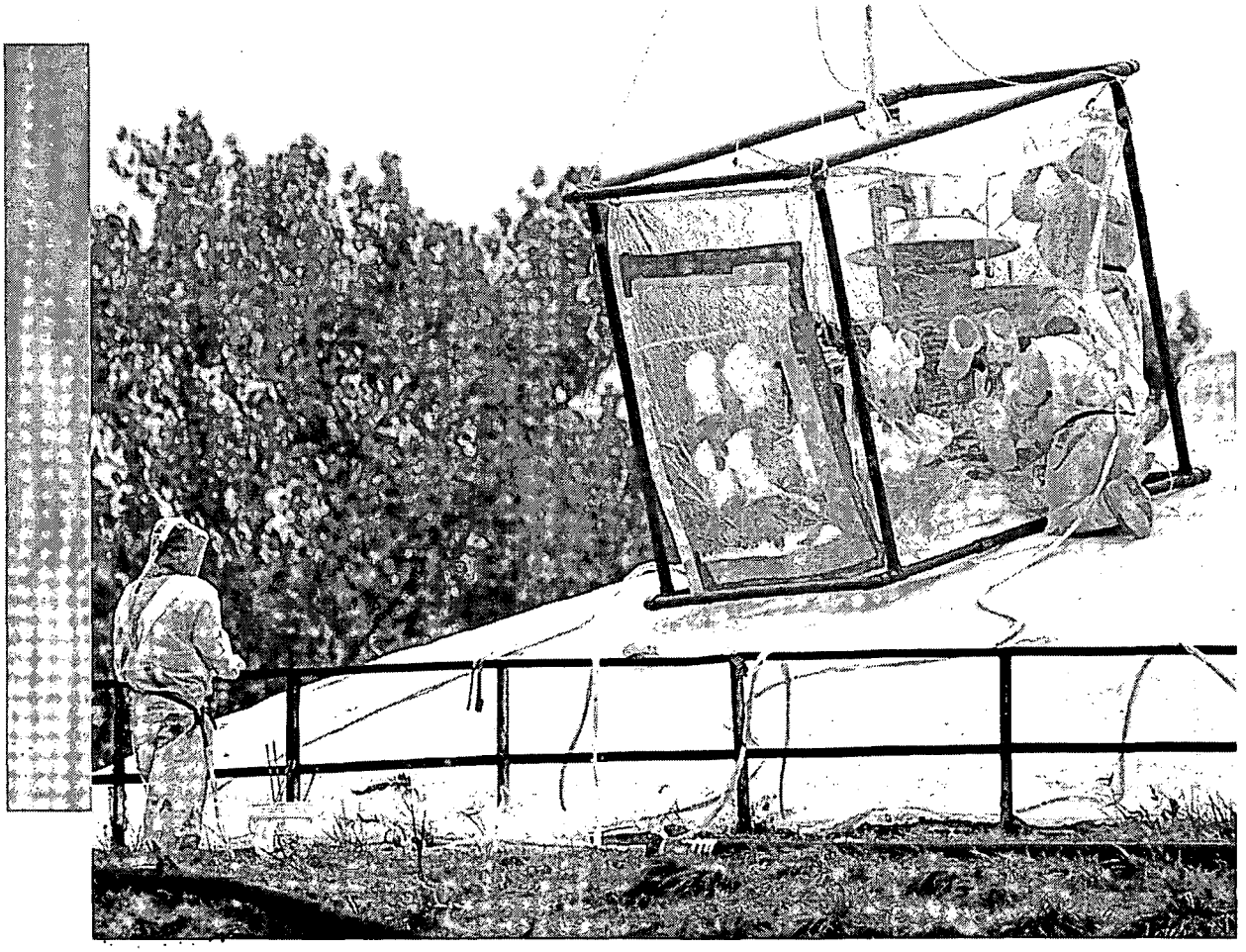
That's a relief

Crews recently installed pressure relief valves in the Silo 1 and Silo 2 manways. The valves, which are a part of the newly-built Radon Control System, will ensure safe pressure control while the system reduces the radon in the silos headspace.

Before workers installed the valves, the Silos Construction team had to be certain the job could be done safely, which required enlisting the help of many different departments. The Quality Assurance and Quality Control departments verified the valves were compliant with specifications, while the Construction and Maintenance departments worked together to develop a plan for safely assembling the valves, flanges and other piping components. They mocked up the valve assemblies in the shop to verify weight, balance and safe handling during the rigging and hoisting process.

Radiological Safety developed a work plan that identified hazards associated with breaching the silo dome manways. The radiological engineer calculated the amount of radon gas that could possibly escape if there was positive pressure within the dome and then sized the glove bag to accommodate such a release. Radiation Safety briefed the workers on safe installation and ground coaches walked the crew through the process step-by-step. As an added precaution, workers involved directly in the installation wore positive pressure bubble suits. Radiation Safety left the glove bags in place until the released radon had decayed.

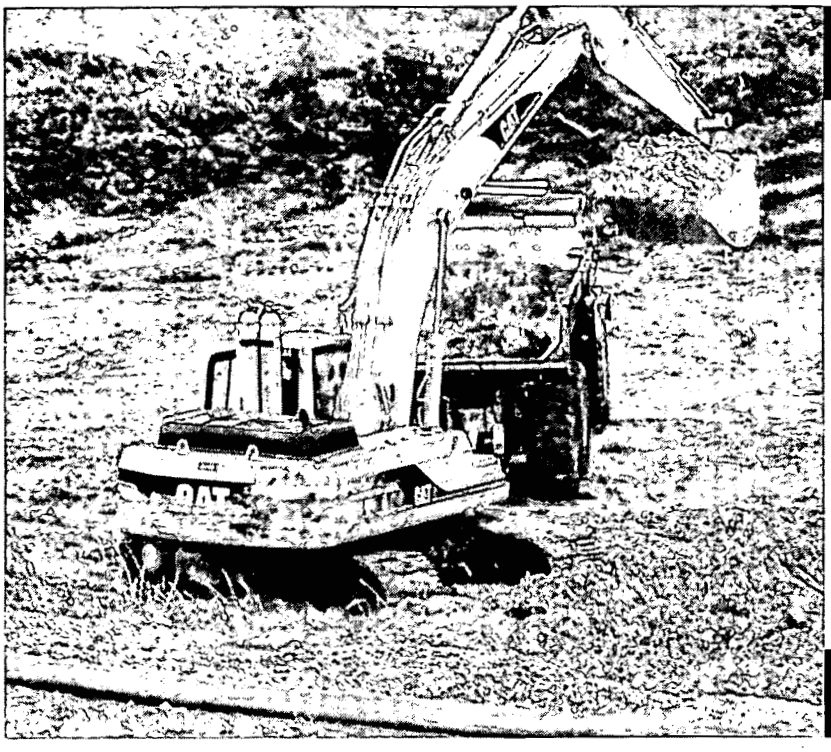
The valve installation on the first silo went so smoothly the project team decided to continue the plan for the second silo. The crew completed both jobs in one day.



Left: Using a glove bag, a crew installs a pressure relief valve in a manway of one of the K-65 silos (7385-d2145).

000003

Cleanup **Progress** Update



Waste Pits Remedial Action Project (WPRAP)

- ☐ Safely transported trains #66 - #69 to Envirocare of Utah during September/October timeframe bringing the total tonnage shipped to over 435,000 tons (actual FY02 progress exceeded baseline expectations by 10,000 tons)
- ☐ Excavations are ongoing in Pits 1, 2, 3, 4, and 5; Pit 4 cap material has been excavated and stockpiled; dewatering activities are underway in Pit 6 to support upcoming excavation
- ☐ The Final Explanation of Significant Differences for Operable Unit 1 which allows the processing of other FEMP waste streams via the waste pits processes and facilities has been signed by DOE Ohio Field Office and transmitted to US EPA Region V for approval
- ■ **Project 54% Complete**

Silos Projects

- ☐ Completed the Radon Control System (RCS) valve placement on Silos 1 and 2 and prepared for (RCS) hot test
- ☐ Prepared for deck and superstructure construction in the Transfer Tank Area
- ☐ Began construction on the structural mat for the Silos 1 and 2 treatment facility
- ☐ Completed Silo 4 Reinforcement Project
- ☐ Completed Silo 3 final design
- ☑ Continued Silo 3 site preparation, including demolition of old concrete foundations
- ■ **Silos 1 and 2 Project 20% Complete**
- ■ **Silo 3 Project 11% Complete**

Above left: Excavation of the waste pits will continue through the winter months. Over 400,000 tons of waste from Pits 1, 2, 3, and 5 have been excavated and shipped for disposal (6944-d1813).

Left: Riggers ready a panel of shielding which will be lifted into place near the Radon Control System carbon beds (7385-d1007).

000004

Soil and Disposal Facility Project

- Placed 35,000 cubic yards of impacted material in Cells 2 and 3 of OSDF; Cell 2 is 100% filled (will install cap in 2003), Cell 3 is 51% filled
- Initiated restoration work in Southern Waste Units and Northern Pine Area
- Completed liner construction and first waste placement in Cells 4 and 5 of the OSDF
- Started excavation of the old Fire Training Facility
- Completed excavation of the lay down area south of the Pilot Plant Drainage Ditch
- Completed excavation of the two lime sludge ponds in the production area
- Continued operation of the bulk debris staging at the On-site Material Transfer Area; over 1550 rolloff boxes emptied to date
- **Project 37% Complete**

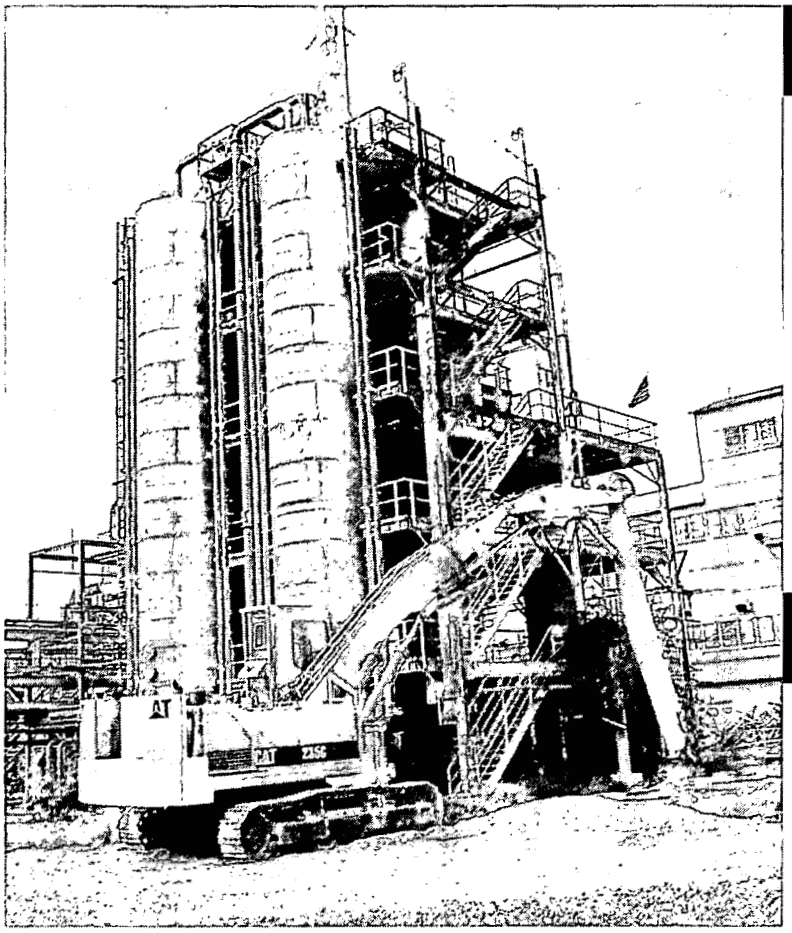
Aquifer Restoration/ Wastewater Project

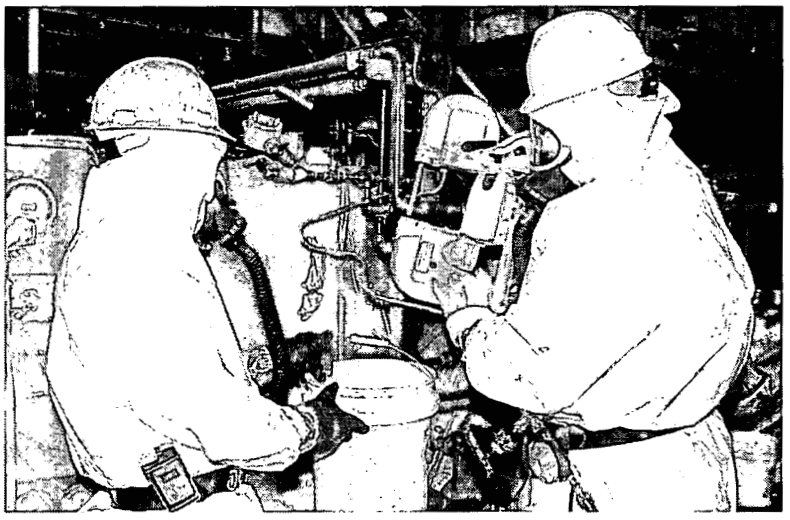
- Performed geoprobing to determine: design parameters for future South Plume Optimization Phase II module, snapshot of injection cleanup progress, and verification of Plant 6 plume attenuation
- Completed installation of 4 extraction wells, 1 injection well, and 26 monitoring wells in preparation for South Plume Phase II module
- Installed 2 new groundwater monitoring wells at the OSDF's Cell 6 and began monitoring to support Cell 6's accelerated startup
- Completed modifications to Sewage Treatment Plant east aeration tank to convert it into a flow equalization basin
- August/September totals: extracted 439,253,000 gallons of groundwater; treated 240,141,000 gallons of groundwater; removed 257 net pounds of uranium from aquifer
- **Project 65% Complete**

Top: Roosevelt McDonald, an employee with Wise Construction, assists in the restoration of the Southern Waste Units, a 26-acre area in the southern portion of the site. Over 400,000 cubic yards of contaminated soil and debris were excavated and dispositioned from this area (7800-d0116).

Above: A laborer checks the calibration on a laser level that is used to adjust the height of the bulldozer blade as an operating engineer spreads gravel in Cell 5 of the OSDF (6319-d3807).

Cleanup **Progress** Update





Demolition Projects

Decontamination & Demolition (D&D)

- ☐ Ongoing activities in the Multi-Complex (Plants 2, 3, 8, Pilot Plant, Building 64/65 and General Sump) included:
  - ◇ Asbestos abatement; removal of equipment, piping, lead and interior transite; gross washdown and size reducing debris and placement in roll-off boxes for disposition
  - ◇ Lab Building emptied and turned over to D&D
- ■ **Project 50% Complete**

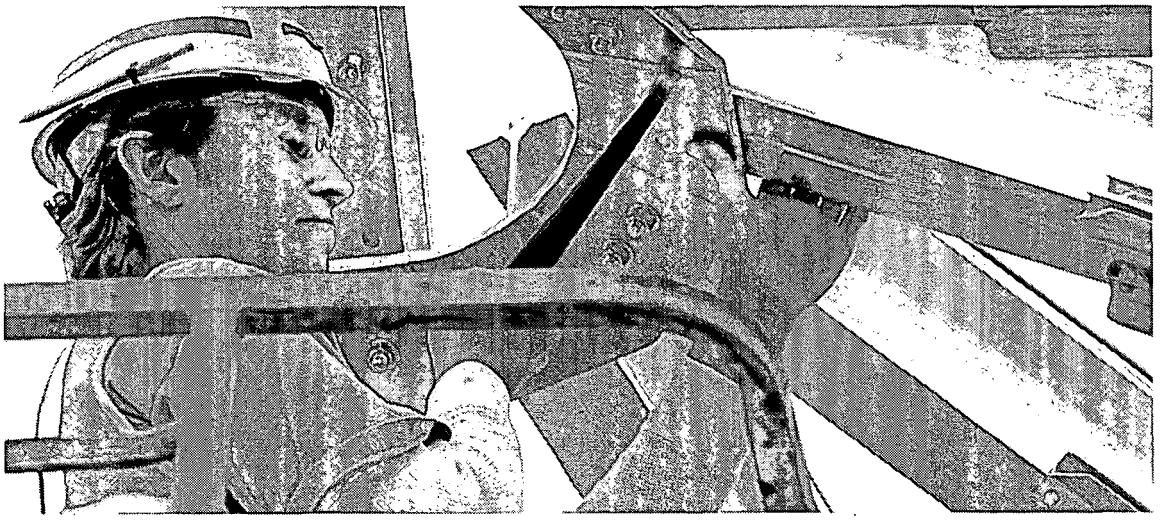
Waste Management Project

- ☐ Low Level/ Uranium Waste Project
  - ◇ Continued characterization and visual inspection of containers
  - ◇ Continued packaging of materials for shipment to the Nevada Test Site
- ☐ Liquid Mixed Waste Bulking Project
  - ◇ Completed shipment of Batch 12 liquid mixed waste to the Toxic Substance Control Act (TSCA) Incinerator inTennessee
- ■ **Project 94% Complete**

Top left: A view of the Nitric Acid Recovery towers prior to majo demolition. The towers were originally used to recover nitric ac that was used in the processing of uranium ores (6383-d0934).

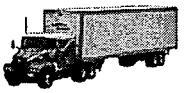
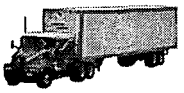
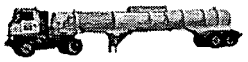
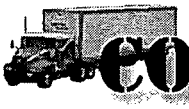
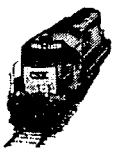
Left: Mactec operators on airline respirators prepare to make a cut in a section of process piping in the Pilot Plant. One of the operators holds a bucket for precautionary measures in case the is any remaining hold-up material in the pipe (6254-d0289).

000006



Left: A Wise Services employee connects the support legs to the Portable Processing Units, which are being used for low-level waste (7547-d0155).

Fernald Shipments – September / October 2002

Contents / Destination	Shipment Mode	Number of Shipments	Monthly Total	FY03 Total	Approximate Project Totals
Low-Level Waste (Nevada Test Site)		32	17,661 cu. ft.	5,761 cu. ft.	6.2 million cu. ft.
Mixed Waste - Materials & Energy Corporation at Oak Ridge		9	2,638 cu. ft.	959 cu. ft.	12,214 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		5	16,552 gal.	2,638 gal.	163,912 gal.
Nuclear product/materials (Portsmouth)	 COMPLETE		et lbs. 0 metric tons uranium	451,305 net lbs. or 181.6 metric tons uranium	9,083,388 net lbs. or 3,541.1 metric tons uranium
Soil and debris - On Site Disposal Facility		N/A	40,595 in-place cubic yards	500 in-place cubic yards	855,595 in-place cubic yards
Waste Pits Project (Envirocare of Utah, Inc.)		4 unit trains (243 railcars)	26,177 tons	12,826 tons	435,341 tons

Graphics # 5949

000007

Ready, set, go!

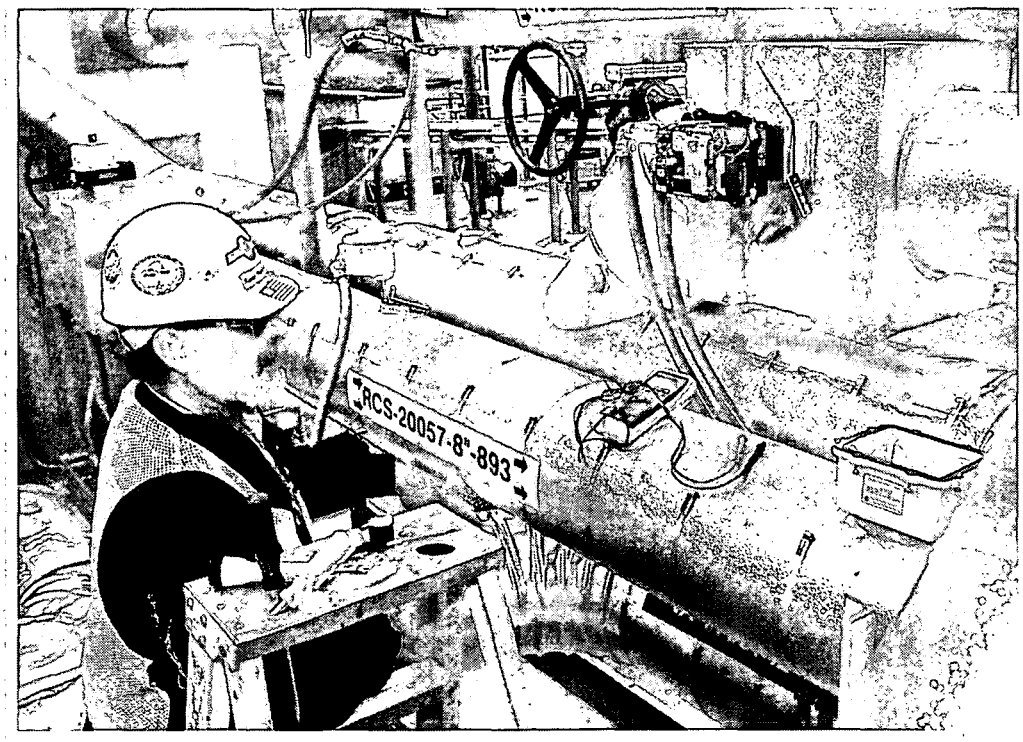
If you prepared for a big vacation this past summer, you probably made a list of things to pack, stopped your newspaper delivery, arranged for someone to care for your pets and pick up your mail, had a mechanic check the roadworthiness of your vehicle, and asked neighbors to keep an eye on your home. In other words, you practiced "readiness."

Here at Fernald, we take readiness seriously. For example, Silos Project personnel recently declared readiness for the Radon Control System (RCS) Hot Systems Test, but not until after they followed very stringent guidelines comprised of an elaborate web of checks and balances. The readiness group, headed by Linda England, first became involved during the design phase. They reviewed all the departments associated with the project: Safety, including Industrial Hygiene and Radiological Safety; Engineering; Quality Assurance; Conduct of Operations; and Operations, including Maintenance and Training. They also consulted site regulators, including the U.S. Environmental Protection Agency (EPA), Ohio EPA, the Department of Energy (DOE) and stakeholders, to ensure Fernald integrated regulator and community input into RCS operation plans.

Under the watchful eyes of the readiness group, each department wrote procedures describing RCS Hot Test project responsibilities, performed self-assessments and fixed any problems that emerged on the resulting non-conformance reports. An independent quality assurance and control unit then conducted surveillances on safety, procedures, plans, environmental compliance and engineering. The Silos Project then remedied any problems that emerged on those resulting non-conformance reports. An independent Management Assessment, led by Tulanda Brown, conducted an overall review, after which the Silos Project performed a final self assessment and wrote a letter declaring the project was ready to proceed.

Led by Don Paine, Fluor Fernald and teaming partner personnel not connected with the Silos Project, are conducting a Standard Startup Review (SSR), which includes demonstrations and safety drills. A DOE team, led by Jack Zimmerman from the Ohio Field Office, is conducting a Readiness Assessment (RA) to evaluate Fluor's SSR process. The Defense Nuclear Facilities Safety Board (DNFSB) is also involved in evaluating the DOE's Readiness Assessment. When all parties are satisfied that the project can safely proceed, Steve McCracken, DOE-Fernald director, will write a letter to Jack Craig, DOE Ohio Field Office acting manager, who will authorize the startup of the RCS Hot Test.

It seems like an awful lot of paperwork, but in a way, that's the point. Each step of each phase of each operation of each project is carefully documented; the records generated by such procedures are easily traceable. Since readiness constantly "takes the pulse" of a project, it helps Fernald efficiently reach closure while remaining accountable to the environment, workers and community.



Below: To prepare for readiness, an instrument technician verifies the operation of a motor-actuated louver on the inlet piping to the RCS carbon beds (7385-d2065).

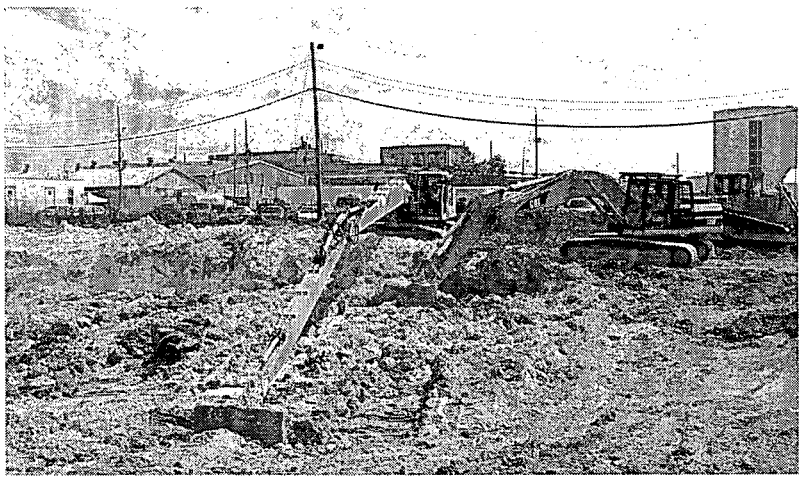
000008

Second cell reaches capacity

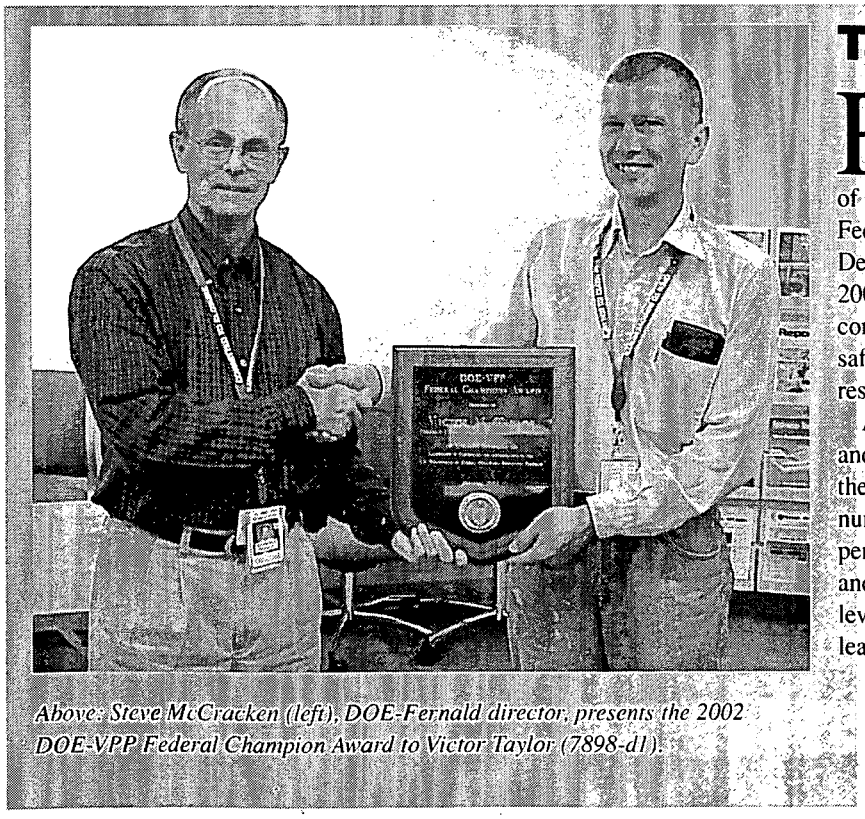
Another milestone was reached this year for the Soil and Disposal Facility Project when Cell 2 of the On-Site Disposal Facility (OSDF) was completely filled with almost 375,000 cubic yards impacted material. It will be capped in 2003. Cell 3 contains about 190,000 cubic yards (51 percent complete) and has been closed for this construction season. Over 210,000 cubic yards of soil and debris were placed in Cells 2 and 3 this year. Installation of the liners for Cells 4 and 5 are now completed and the first waste was placed in November. The clay screening in the Borrow Area ceased operations in October with enough clay stockpiled for the 2003 construction season.

Excavation work has focused on the former production area this summer since most of the contaminated soil from outside that area has already been dispositioned. Concrete breaking and excavation of the soils beneath Plants 4, 5, 6, 7 and 9 in the eastern sections of the former production area and the former Fire Training Facility will be ongoing. The two lime sludge ponds near the Waste Storage Area and the area for the new treatment facility near the silos have been completed.

Final Restoration of the Southern Waste Units (SWU) began in the spring and will be completed in the spring of 2003. At the end of 2002, approximately 2,000 trees and shrubs had been planted in the SWU project area. Restoration activities were also initiated in the Northern Pine Plantation in the spring of 2002. Approximately 20 acres of existing pine trees, many of which were stressed due to disease and overcrowding, were cleared. Grading to form new wetland and vernal pools was initiated in the fall of 2002 and will be completed by the end of the calendar year. At the end of 2002, approximately 1,000 trees and shrubs had been planted in the Northern Pine Plantation project area.



Above: The north and south lime sludge ponds were part of Operable Unit 2 and contained waste from past water treatment plant operations. Approximately 30,000 cubic yards were excavated (7063-d0081).



Above: Steve McCracken (left), DOE-Fernald director, presents the 2002 DOE-VPP Federal Champion Award to Victor Taylor (7898-d1).

Taylor honored by DOE

Recently, in the Fernald Department of Energy monthly project meeting, DOE-Fernald Director Steve McCracken presented the 2002 Department of Energy's Voluntary Protection Program (DOE-VPP) Federal Champion Award to Fernald's, Victor Taylor. The Department established the DOE-VPP Champion Award in 2001 as a method of officially acknowledging individual contributions to partnerships that create more effective safety and health programs which cost less and deliver results.

At Fernald, Victor has been instrumental in organizing and coordinating Fernald's VPP effort and in strengthening the site's overall commitment to safety excellence. On numerous occasions Victor has unselfishly contributed personal time to benefit others striving to improve safety and health programs. Victor is well known for Department-level support because he serves as an on-site review team leader at other DOE work sites.

000009

Above: (Left) Barry Ko and Julie Flynn hand out "Do Work Safely" Safety First pens to kick off the re-energization of the Safety First Program. Brian MacRoberts (right) stops by to get his pen and look at the safety plaques recently awarded to various projects at Fernald (7882-d0005).

Renewed commitment to safety

In an effort to keep safety in the forefront at Fernald, the site has renewed its commitment to safety and reenergized worker safety programs. A series of meetings with all levels of management kicked off the effort. Meetings with site safety professionals, wage safety representatives and more than 150 Safety First advocates followed.

Familiarizing and re-energizing everyone about the site's Safety First program was the focus. The program is self-explanatory – safety comes first! The Safety First program works on a tiered level that encourages employees to handle issues at the lowest level possible. Workers correct issues within their control and those they can't resolve are elevated to the next level. Engaging the workforce merits great results. "I want every employee to think about their job and how they can do it safely. Work safely and the numbers will follow," said Jamie Jameson, Fluor Fernald's executive project director, "with everyone's attention, we'll get there one day at a time."

FCAB looks to the future

The Fernald Citizens Advisory Board recently completed a year-long effort to evaluate public needs for accessing site information after site closure. The FCAB conducted the study under a grant from DOE's Office of Long-Term Stewardship as a continuation of the Future of Fernald program. The FCAB held a public workshop in March to identify public interests and concerns regarding post-closure preservation of and possible modes of access to information at the Fernald site. Overall, members of the public want access to information necessary to "tell the story" of Fernald. They feel it's important that future generations be aware of and appreciate Fernald's past activities. In May, the FCAB hosted a design charrette that developed conceptual ideas for a facility, which would provide ongoing education about the Fernald site and related community issues. The FCAB prepared a final report "Telling the Story of Fernald," that describes the process, results, and recommendations. It can be found at www.fernaldcab.org.

In addition to its work on the future of Fernald and long-term stewardship, the FCAB continues to play an important role by providing public input into a broad range of cleanup issues. The FCAB has provided extensive comments to DOE on rebaselining, accelerated cleanup and many elements of remediation. Their meetings are open to the public and are posted on both the FCAB and Fernald web sites.

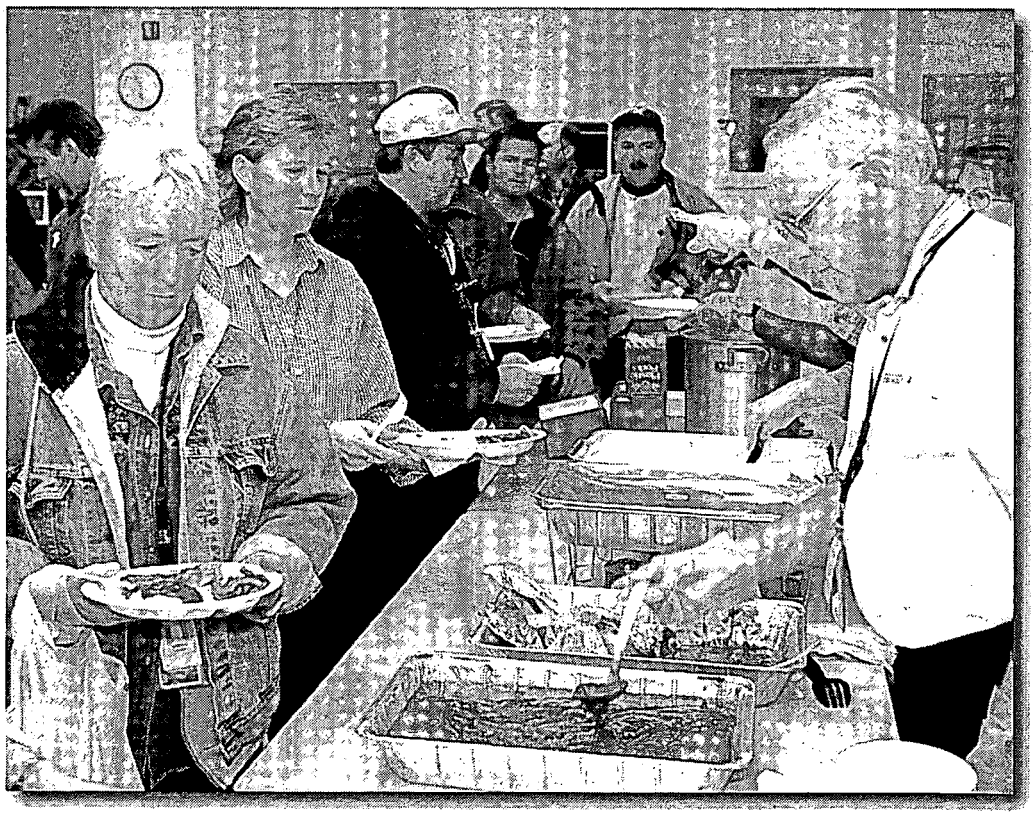
Adopting a patch of green

For the past ten years Fernald employees and their families have been playing in the dirt, throwing mulch down and planting some shade. Every fall and spring, Adopt-a-Park volunteers meet at nearby Miami Whitewater Park to assist park staff in whatever needs doing. Over the years the group has planted trees at the new soccer fields, done roadside pruning and mulched flowers at the golf center. Being a good neighbor takes on many forms and sometimes involves getting dirty.

Fluor Fernald employees raise $135,000 for community

Fluor Fernald's 2002 United Way Campaign came to a close on Oct. 29, shattering the $100,000 goal by over $35,000. "We were prepared for more challenges this year since our workforce is smaller and the economy is slow, but Fernald workers responded again,"said Tina Mefford-Craig, United Way co-chair.

In addition to employee donations and the Fluor Foundation 50 percent match, employees raised money by organizing golf outings, bake sales, silent auctions and a union vs. management softball game. According to Fluor Fernald Project Director Jamie Jameson, "The United Way Campaign brings us together as a site. We have fun and raise money for folks who really need it in our community. It doesn't get much better than that."



Above: Dave Wood with Shipping Logistics (right) serves up gravy to go with the United Way Grand Finale chicken and pork dinners (7881-d0016).

000011

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
- ◇ OEPA Letter – Waste Pit 4 Cap Excavation Implementation Plan Project

☐ Soil and Disposal Facility Project
- ◇ USEPA Approval – On-Site Disposal Facility Phase IV Technical Specifications
- ◇ DOE-FEMP Letter – Discovery of Concrete Debris in Area 2, Phase III – Part One

☐ Decontamination and Demolition Project
- ◇ OEPA Approval – Project Completion Report of the Maintenance/Tank Farm Project
- ◇ OEPA Approval – Project Completion Report for D&D of Plant 6 Complex
- ◇ DOE-Fernald Report – Administrative Complex Phase I Decontamination and Dismantlement Project Completion Report

☐ Silos Project
- ◇ USEPA Comments – Area 7 Phase I Pre-certification
- ◇ USEPA Approval – Construction Information of Sheet Piling for Silo 3 Excavator Pit Foundation
- ◇ USEPA Approval – Silos 1 and 2 Warehouse, Railroad Spurs and Remediation Building Mat Foundation Design Package

☐ Aquifer Project
- ◇ OEPA Approval – Project Specific Plan for Installation of the South Field Phase II Wells

Note: This does not represent the complete list of new documents added to the PEIC. Contact the PEIC, 513-648-5051 for a complete list of new documents.

Fernald Report
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