

fernal **Report**

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3629

March / April 2001



Steve McCracken

From weapons to wetlands

On Tuesday, May 8, 2001, Fernald will commemorate its 50-year history of uranium production and environmental restoration. From the 1950s through the mid-80s, Fernald produced high purity uranium for the nation's nuclear weapons complex. This work was instrumental in helping America win the Cold War. In the late 1980s, the site's mission shifted from national defense to environmental restoration. For the first time, the public learned of the extent of the site's contamination and demanded a voice in cleanup

decisions. While those initial requests for information were met with resistance, involving stakeholders in the decision-making process has proven to be a major factor in the successful remediation of the site.

Although I have only been here a short time, it is clear that we have some of the best workers and neighbors in the DOE complex. Even though they've played different roles, these groups have made Fernald what it is today and what it will be when we're done.

As we celebrate Fernald's 50 year history, special people that come to mind are Gene Branham, William "Vinny" Vinson and Jim Wallace. Collectively, these men have nearly 150 years of service at Fernald. They were here in this site's infancy and I hope they plan to be here for the last hurrah. Their fortitude is characteristic of the many men and women who have served at Fernald throughout the past 50 years.

On May 8th, we will be honoring our retirees and current employees. We will reflect on what we have accomplished and take note of what we have left to do. We will recognize the site's inclusion in DOE's Voluntary Protection Program for our exemplary safety program. We will thank the families who made their homes on this land before the government obtained it to build the site. We will take a moment to acknowledge the contributions of our stakeholders.

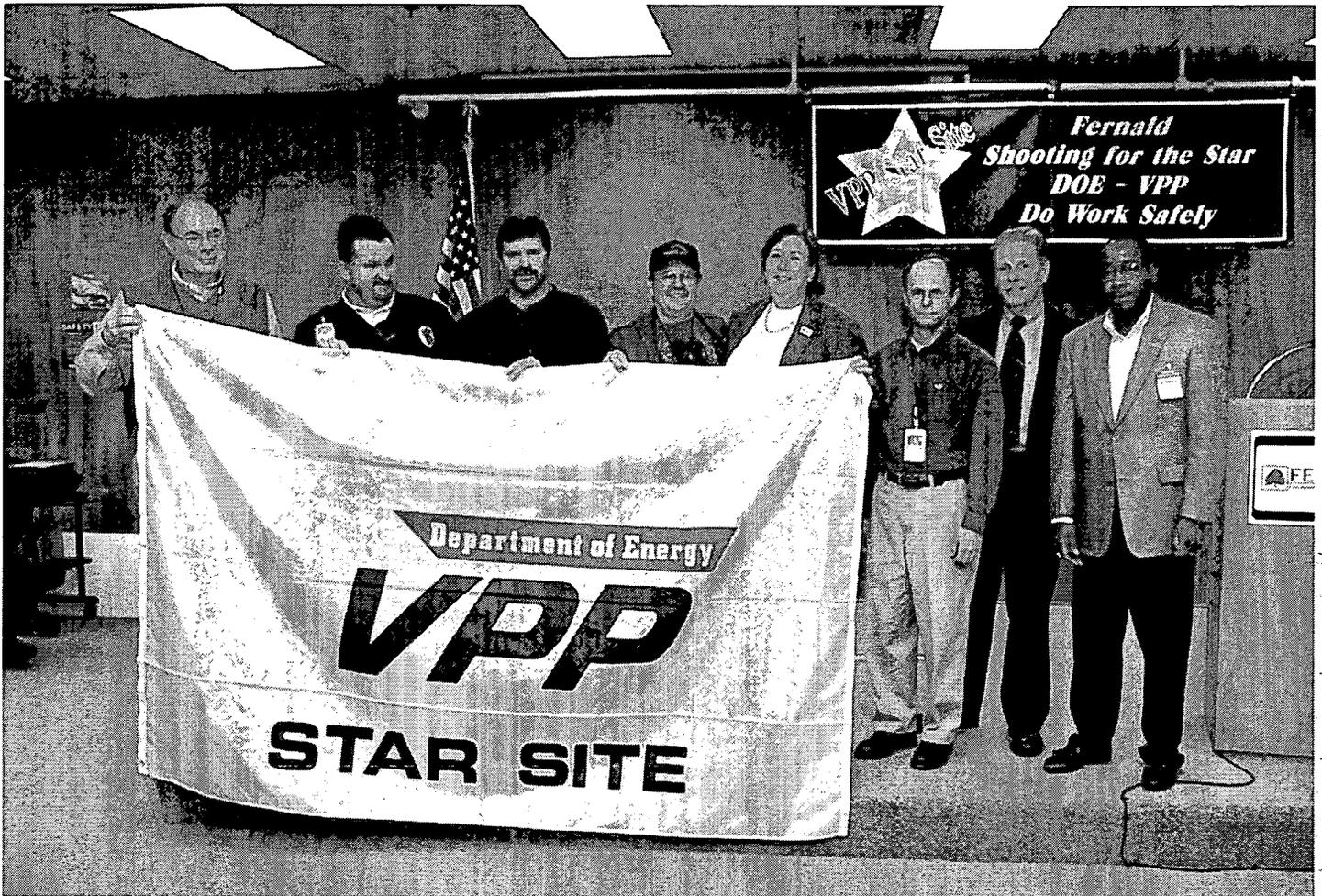
The observation starts at 10:30 a.m. and will be followed by a lunch. Then we will have an outdoor museum set up for you to walk through along with hourly viewings of the Fernald documentary and site tours. This will certainly be an emotional day to honor those who quietly served our nation. Please plan to join us.



A handwritten signature in cursive that reads "Steve McCracken".

Steve McCracken
Director, DOE-Fernald

For more
information on
Fernald at 50 -
Weapons to
Wetlands, visit
www.fernald.gov or
call Ric Strobl
513-648-5037



A STAR is born

Fluor Fernald celebrated its Voluntary Protection Program (VPP) Star Status on March 13, 2001 with representatives from DOE HQ, Fluor Corporate and our site unions present to congratulate Fernald employees. The Star Status was awarded to Fernald following a site visit and review of Fernald's Safety and Health program by DOE and the Labor Department's Occupational Safety and Health Administration (OSHA).

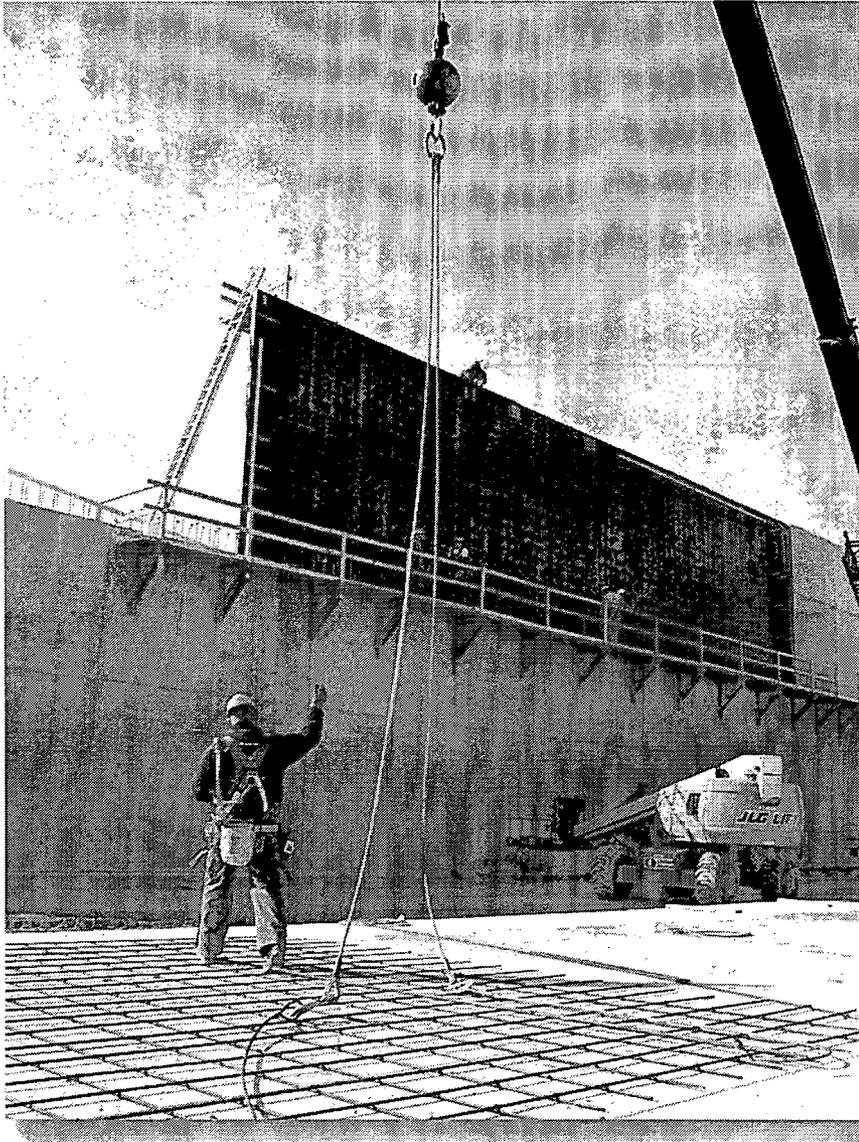
The DOE VPP is designed to mitigate risk in the workplace by encouraging excellence in Safety & Health programs that can only be achieved through full involvement and commitment by management and employees. VPP is divided into five elements: Management Leadership; Employee Involvement; Hazard Prevention and Control; Worksite Analysis; and Safety and Health Training. John Bradburne, Fluor Fernald president and CEO said, "The employees at Fernald take safety very seriously. It is not just part of the job, it is a way of life."

Steve McCracken, DOE-Fernald director said, "Working safely and living safely will continue to be our focus at Fernald. The continuation of the 24-hour safety culture is critical to the successful completion of this project. Earning VPP Star Status is a clear indication of the importance we place on safety."

A.B. Robinson, Fluor vice president of Safety, emphasized that Fernald's safety program is a model that is emulated in the construction industry and challenged those present to continue efforts in the area of safety and health. Robinson said, "In order to finish this job safely and efficiently it will take a team effort and all of you are being honored for commitment not just to yourself but also to those around you in the way you perform work safely at Fernald."

Above: From left to right: John Bradburne, Fluor Fernald President and CEO; Dale Hamblin, IGUA President; Tony Lack, GCBCTC; Bob Tabor, FAT&LC; Susan Brechbill, Manager, DOE Ohio Field Office; Steve McCracken, Director DOE- Fernald; Ron Eimer, DOE HQ; and A. B. Robinson, Fluor Safety Dept. display the DOE VPP Star site flag that was presented in recognition of the site's outstanding safety and health program (7562-d29).

Cleanup **Progress** Update

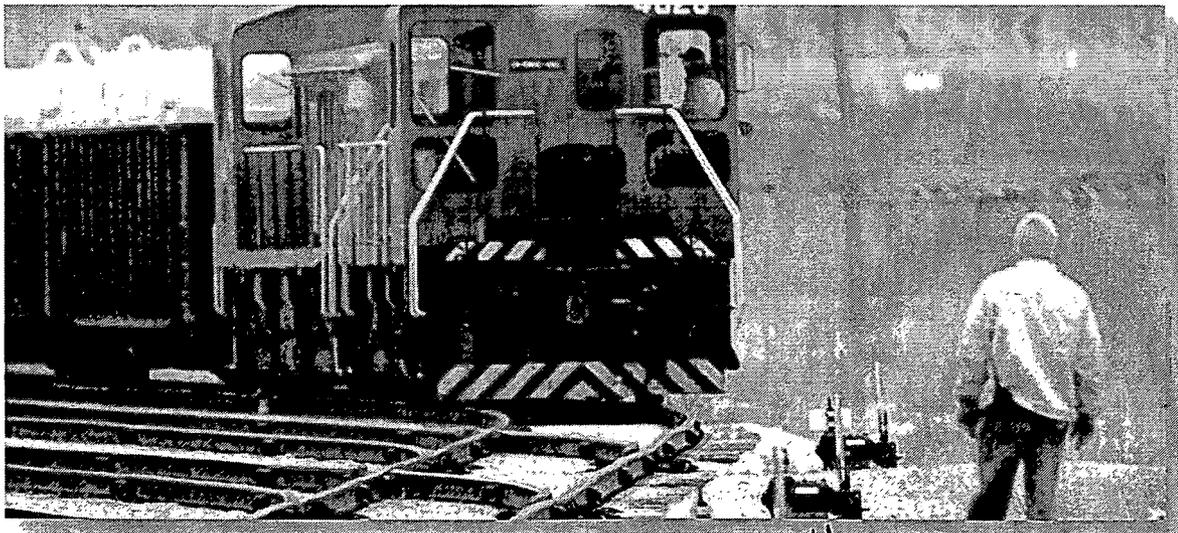


Waste Pits Remedial Action Project (WPRAP)

- WPRAP's volume shipped through CY2000 qualified Envirocare to waive a four percent winter surcharge on shipments received from December 2000 to March 2001.
- Three unit trains (#33, #34, #35) totaling almost 19,500 tons of material were shipped during February and March.
- Excavation continues in Pits 1 and 3; approximately 60 percent of Pit 1 and 50 percent of Pit 3 have been excavated.
- Envirocare recognized WPRAP for 100 percent compliance with disposal criteria during CY2000; no other Envirocare customer qualified.

Silos Project

- Initiated preparation of Design Criteria and Conceptual Design for Silos 1 and 2 full scale remediation facility.
- Submitted Draft Remedial Action Work Plan for Radon Control System Phase 1 Operation to U.S. EPA/OEPA for review.



*Above left:
Chris Flanary, a
rodbuster supervisor,
prepares a rebar mat for
a section of wall form
(7385-d0600).*

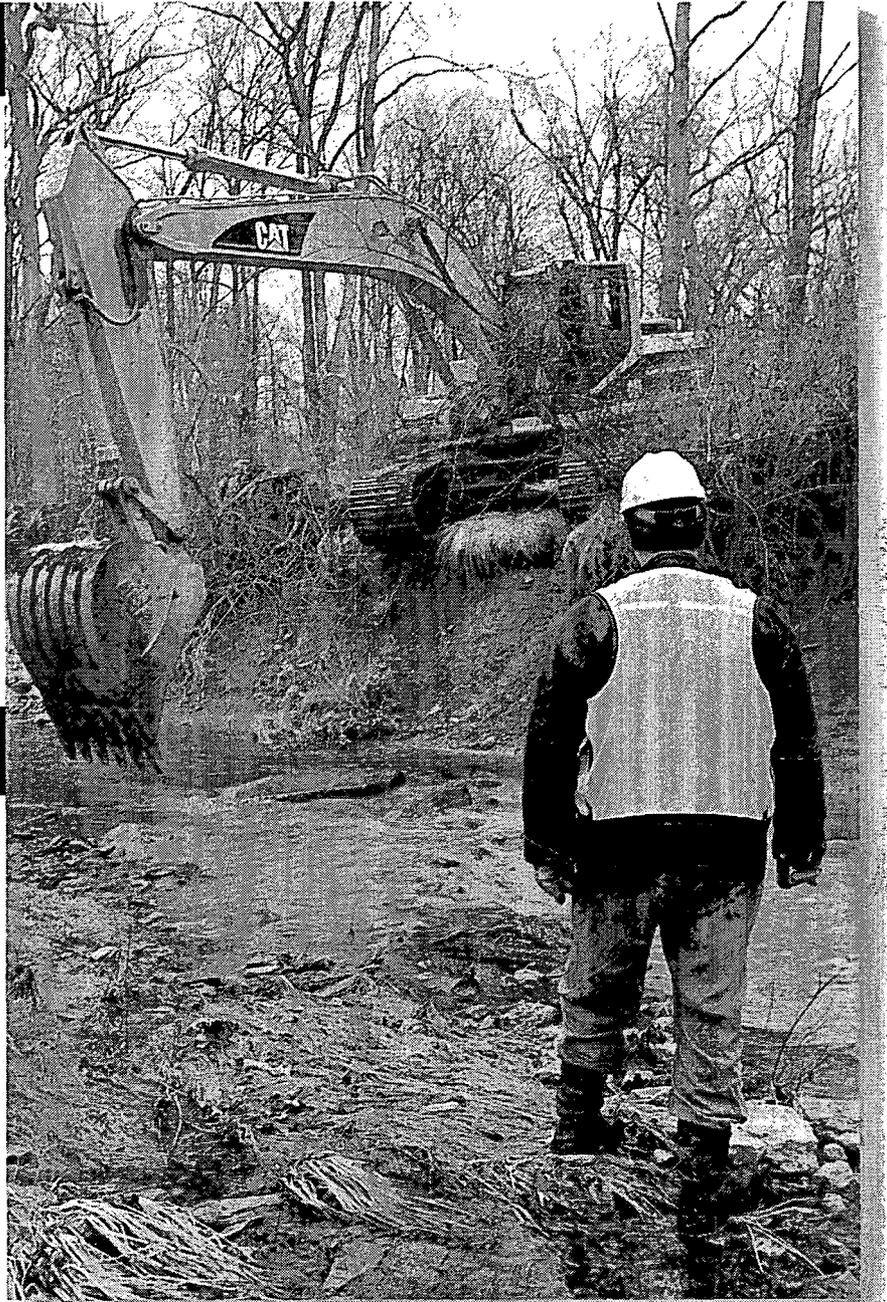
*Left: Jason Bynum, a
switchman, stands by
while a locomotive
operator moves gondola
rail cars in the railyard
(6349-d1815).*

Soil and Disposal Facility Project

- Completed Debris Removal Project in Area 1 Phase III and Paddys Run north of railroad trestle.
- Began segregated debris stockpile in South Field in February.
- Excavation started in the former production area on March 12.
- Continuing procurement of materials for the On-Site Disposal Facility Cell 1 cap.
- Awarded contract in February to Davon for stone and rock for Cell 1 cap.
- Started receiving stone and rock on March 7 for cover drainage layer and biointrusion layer for Cell 1 cap.

Aquifer Restoration/Wastewater Project

- Geoprobings continues in the eastern portion of the South Field in support of the South Field Phase II Module design.
- Trenching and pipe installation continues on the Waste Pits Stormwater Reroute Project; project is 90 percent complete.
- All six valve houses supporting the Enhanced Permanent Leachate Transmission System are 98 percent complete; Start-up Operational Testing began in March.
- January/February extracted 338 million gallons of groundwater; treated 190 million gallons of groundwater.



Above: Bill Cagle, a Wise Construction worker, monitors the debris being removed along Paddys Run near the train trestle (7518-d0058).

Left: Environmental technicians prepare to collect a groundwater sample from a temporary well to determine the vertical profile of total uranium at various depths in the aquifer (6860-d0207).

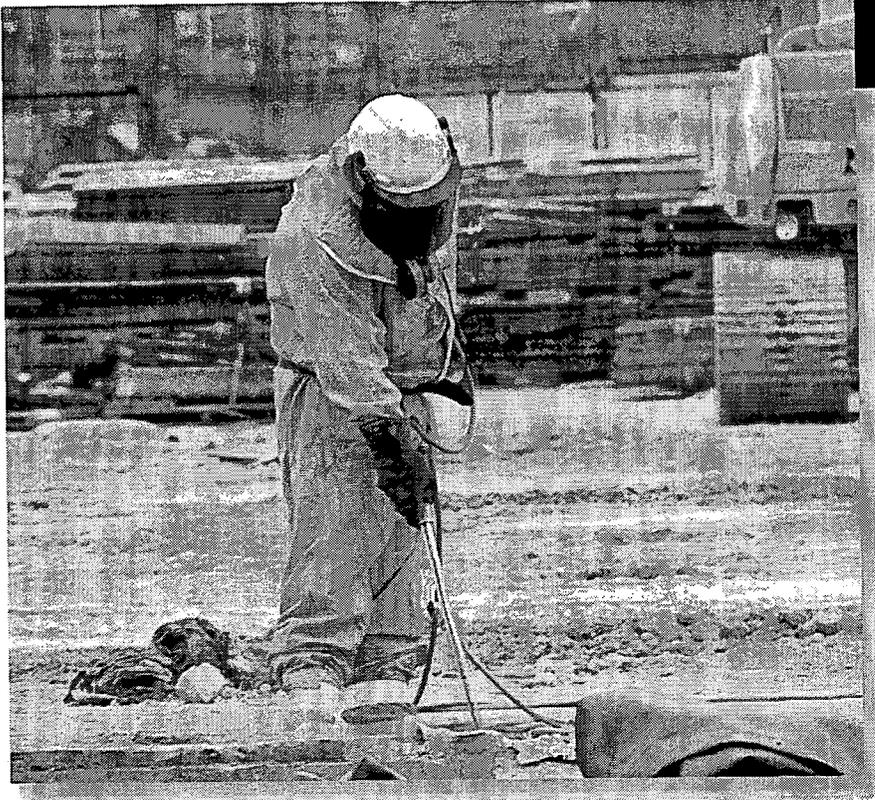


Cleanup Progress Update

Demolition Projects

Decontamination & Dismantlement (D&D)

- Plant 5 Complex —
 - ◆ Completed demolition of entire complex.
- Plant 6 Complex—
 - ◆ Continued interior demolition and removal of equipment and asbestos contaminated material.
 - ◆ Began demolition of the Water Treatment Area and the old Ingot Furnace Stack.
 - ◆ Began below-grade demolition.
- Facilities Shutdown
 - ◆ Continued isolation activities in the General Sump area.



Waste Generator Services

- Continued shipments of nuclear materials to DOE facility at Portsmouth, Ohio — total of 116 metric tons uranium (MTU) shipped in FY01 as of Feb. 28.
- Approximately 3,289 MTU have been transferred since June 1999, representing 87 percent of the 3,801 MTU inventory destined for Portsmouth.
- Completed installation of vacuum transfer system in Building 56; after successful systems testing and startup approval, this system will repackage >1 percent U235 enriched compounds/oxides into shippable quantities.
- Met with representatives from Nuclear Fuel Services to review proposal outlining off-site processing option for low-enriched oxides.
- Submitted consent package to DOE to finalize contract for sale of 79 MTU of enriched uranium metal to private sector customer.
- Continued characterization of selected containers within Uranium Waste Disposition Project.

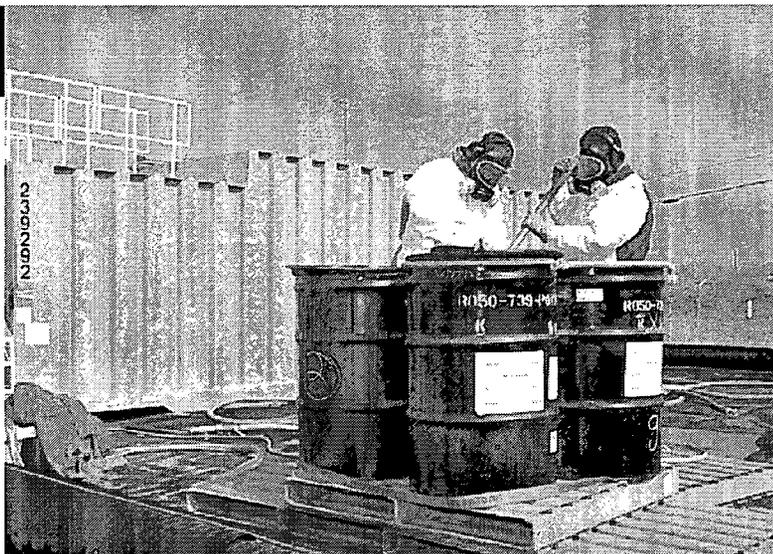


Above top: A cutting torch is used to remove anchor bolts from the Plant 5 pad (6401-d978).

Above: Frank Merrill, Gary Stafford and Joe Billingsly, repackage nuclear product for transfer to Portsmouth (7368-d0260).

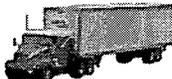
Waste Generator Services

- Thorium Legacy Waste Project —
 - ◆ Completed Management Assessment confirming readiness to process 51 boxes of thoria gel for shipment.
- Waste Treatment and Storage—
 - ◆ Continued Plant 1 Pad consolidation and inventory verification activities.
 - ◆ Received notification from State of Tennessee that liquid mixed waste from Kentucky and Ohio will no longer be accepted by the Toxic Substance Control Act Incinerator at Oak Ridge due to state equity issues.
 - ◆ Continued bulking of selected mixed waste liquids into Batch 11.
 - ◆ Continued exploring other possibilities for liquid mixed waste disposal.



Above: Jeff Brewer and Brian Green pump liquid waste from 55-gallon drums to a consolidation tank (6898-d0136).

Fernald Shipments – February 2001

Contents / Destination	Shipment Mode	Number of Shipments	Monthly Total	FY01 Total	Approximate Project Totals
Low-Level Waste (Nevada Test Site)		9	12,164 cu. ft.	67,829 cu. ft.	5.6 million cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		0	0 gal.	0 gal.	197,000 gal.
Nuclear product/materials (Portsmouth)		28	62,601 net lbs. or 25.3 metric tons uranium	280,661 net lbs. or 115.7 metric tons uranium	8.4 million net lbs. or 3,289 metric tons uranium
Soil and debris - On Site Disposal Facility		0	0	0	594,102 in-place cubic yards
Waste Pits Project (Envirocare of Utah, Inc.)		2 unit trains (120 railcars)	12,914 tons	32,787 tons	206,464 tons

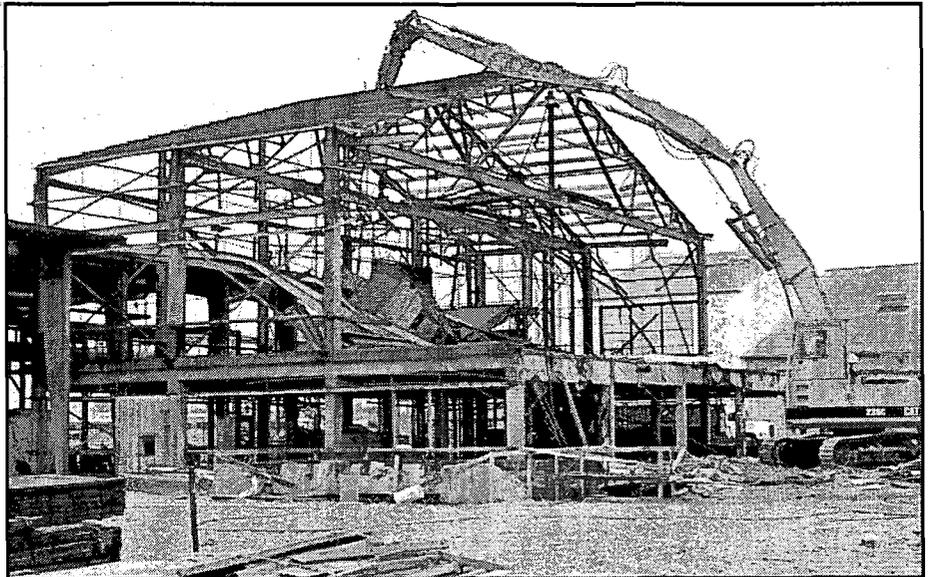
Plant 5 Demolition

Decontamination and Demolition (D&D) projects are in full swing at Fernald. The demolition of Plant 5, the 100,000 square-foot former metals production plant, was completed at the end of March, one month ahead of schedule.

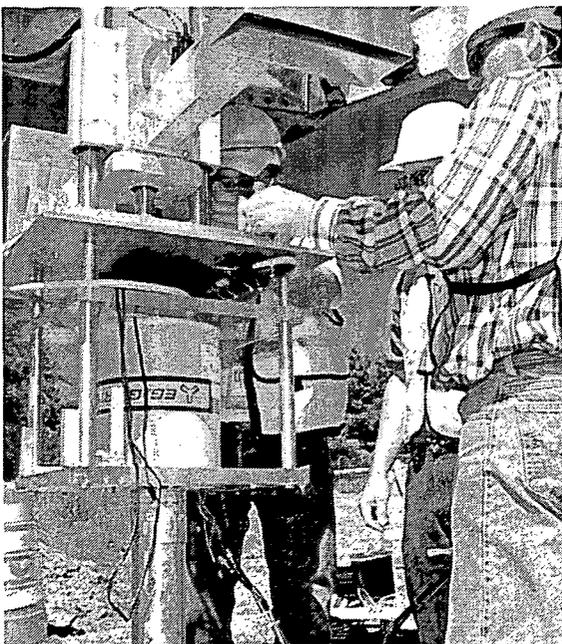
To complete the Plant 5 D&D project safely and efficiently, D&D crews used techniques not previously used when demolishing other structures. First, the building was initially cleaned to reduce airborne contaminants. This process contributed toward completing interior equipment dismantlement activities without any personnel contamination events.

Another new idea used in the project was to establish a dedicated debris transfer route from the D&D project area to the debris staging area. The establishment of this road in coordination with Waste Generator Services and the Soil Division expedited the movement of wastes from the project area. By transferring the waste via the dedicated transfer route, the waste containers do not have to go through as much of the cleaning and tarping process. "By minimizing cleaning and tarping, we completed the job more safely by having less personnel contact with waste containers," said Mike Stevens, project director, Decontamination and Demolition Projects.

The completion of this project brings the total number of structures decontaminated and demolished at the Fernald site to 91.



*Above:
The decontamination and demolition of Plant 5 will be complete in late March, one month ahead of schedule (6401-d824).*



Above: Technology Programs demonstrate the Excavator Mounted System (7471-d0004).

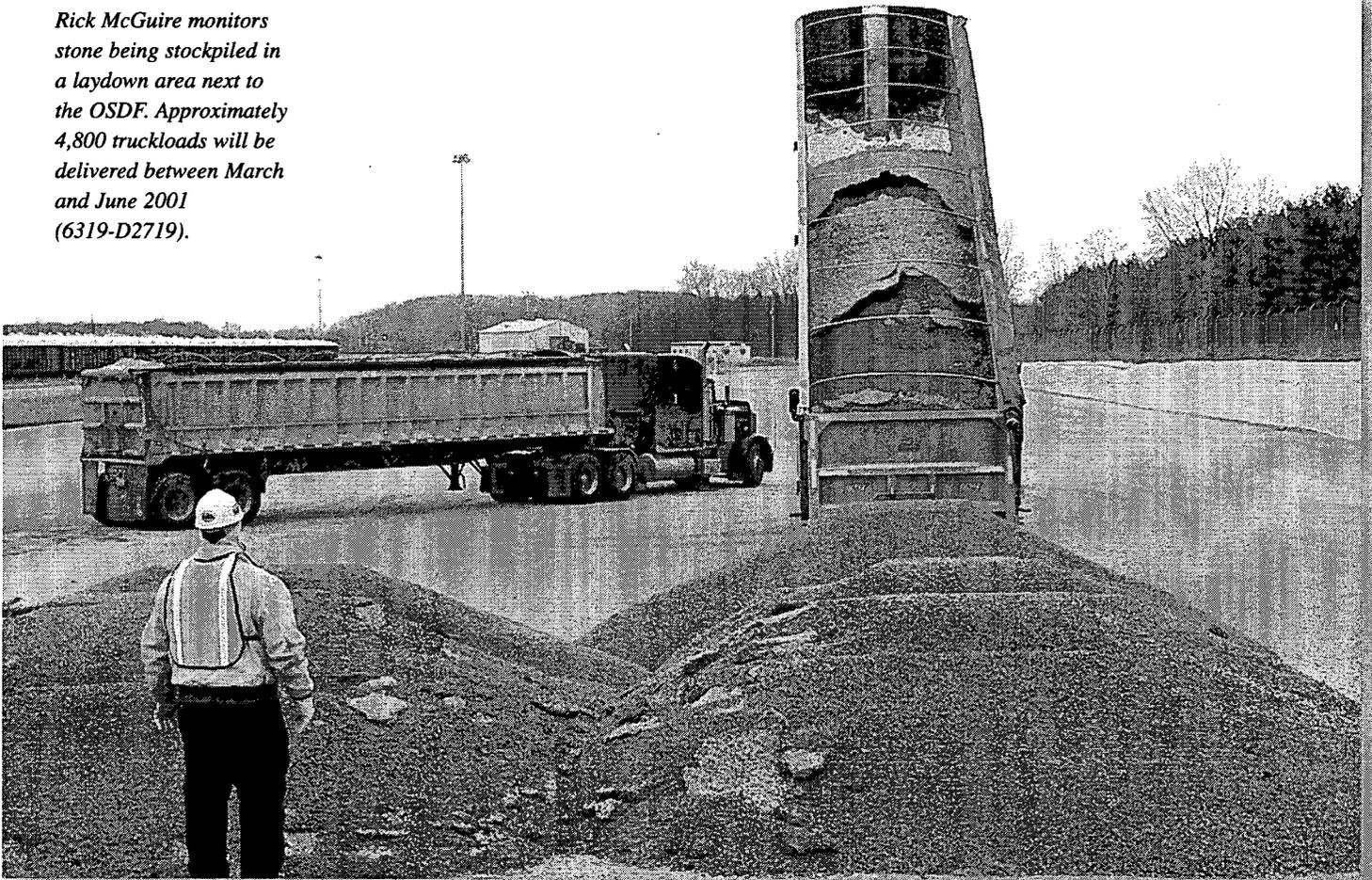
Fernald's Integrating Stewardship Technology Team

The November and January meetings proved productive for the Fernald Integrating Stewardship Technology Team (ISTT). In its first two meetings, the ISTT identified and ranked geomechanical and ecological post-closure monitoring parameters for the Fernald On-Site Disposal Facility (OSDF). The team, composed of regulators, stakeholders, national laboratories, universities and nationally recognized experts, Fernald personnel, and other DOE sites, was formed to assist Fernald management and stakeholders in developing a comprehensive long-term post closure care, inspection and monitoring plan. The team's mission is to identify, demonstrate and deploy innovative technologies that will ensure DOE, regulators and stakeholders that the site and its facilities are secure and performing as designed. Additionally, the team will apply advanced technologies to cost-effectively fulfill the post-closure stewardship and monitoring needs of the OSDF so that they will continue to function at maximum efficiency and the environment will be protected in perpetuity.

The ISTT completed ranking the list of critical monitoring parameters and is currently considering potential technologies capable of measuring the OSDF's drainage layer, settlement/subsidence, soil moisture and temperature, and visual and remote observation.

For more information, contact Marty Prochaska, 513 648-6555, email: marty.prochaska@fernald.gov

Rick McGuire monitors stone being stockpiled in a laydown area next to the OSDF. Approximately 4,800 truckloads will be delivered between March and June 2001 (6319-D2719).



Cell 1 Cap construction to start in April

The On-Site Disposal Facility (OSDF) is designed to hold approximately 2.5 million cubic yards of impacted material in up to 7 cells. Currently, the liners for three cells have been constructed and impacted material has been placed in each of them with Cell 1 having reached its capacity in September 2000. In November 2000, a contract valued at approximately \$2.9 million was awarded to IT Group to build the final cover (cap) over Cell 1.

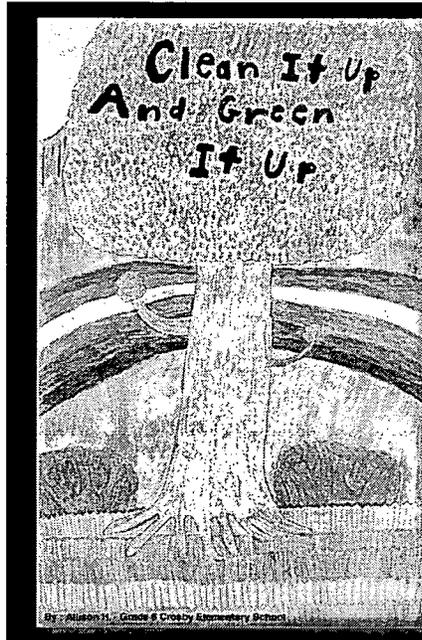
The 8.75-foot thick cap will be constructed in layers of both natural and man-made materials. From top to bottom, the cap will consist of the following: a topsoil layer covered by prairie grass, a vegetative soil layer, a granular filter layer, a biointrusion barrier, a cover drainage layer, geosynthetic liners and compacted clay. This multi-layer cap will be placed over a one-foot thick contouring layer. In March, trucks hauling stone from approved quarries located approximately 75 miles east of the Fernald site began making deliveries to the OSDF laydown area. Approximately 110,000 tons of stone will be delivered through June for construction of the cover drainage layer and biointrusion barrier. IT is currently receiving and unloading this stone in addition to mobilizing for the Cell 1 cap work. Cap construction is expected to be complete in September 2001.

Demolition Closure Project

With site closure fast approaching, Decontamination and Demolition (D&D) activities are picking up. Late in March, the D&D project hopes to award a Demolition Closure Project contract. This sole source contract will give one subcontractor the job of completing the D&D of most of the buildings left standing on site.

Clean It Up... Green It Up

Every year cities around the country organize events to recognize efforts both nationally and locally that carry the message of working together to preserve the planet's health. Cincinnati celebrates the 31st anniversary of Earth Day on Saturday, April 21 at Sawyer Point from 1 p.m. to dark with music, exhibits, giveaways, a tree planting and more. A very special performance by Cowboy Junkies will highlight the event. The Fernald site is one of many environmental exhibits at the event sponsored by the Greater Cincinnati Earth Coalition.



THE GREATER CINCINNATI EARTH COALITION PRESENTS

Earth Day 2001

April 21

featuring

Cowboy Junkies

1 p.m. to Dark

Sawyer Point

FREE FUN-FILLED FAMILY FESTIVITIES



CINERGY. Fluor Fernald



A BIG Event

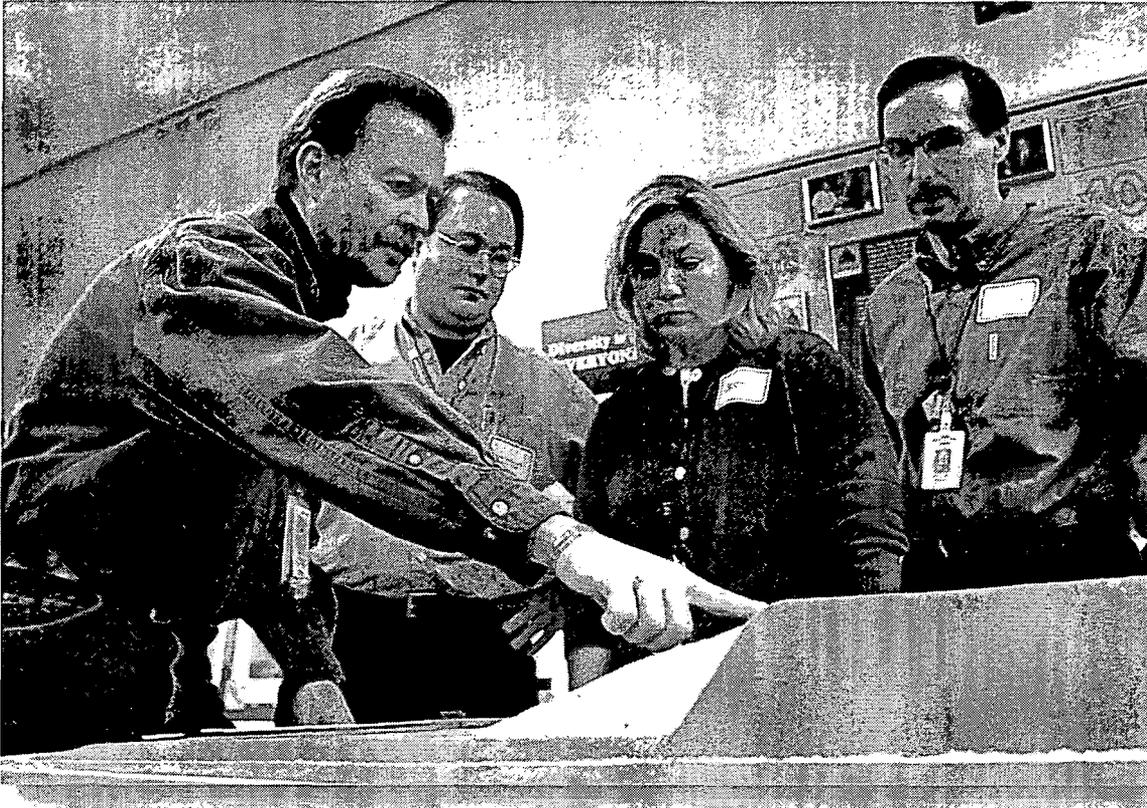
About 150 people attended the 6th Annual African-American History Month Awards Gala sponsored by the Greater Cincinnati/Miami Valley Chapter of Blacks In Government (BIG) on Feb. 24.

The Honorable Judge Nathaniel R. Jones of the U.S. Court of Appeals, 6th Circuit Court, served as the keynote speaker.

The event included the presentation of two scholarships to local high school students and five honorary awards. The following individuals received honorary awards for their community involvement work: Sue Walpole, (pictured with Randy Gist) Fluor Fernald; Sanita M. Webb, BWXT of Ohio, Inc.; Luther Brown, Fluor Fernald; Kevin R. Cooke, Jr., Department of Energy; and the Centerville/Washington Township Diversity Council.

The event also received a special City of Cincinnati proclamation from Mayor Charlie Luken proclaiming February 24, 2001 as "Greater Cincinnati/Miami Valley Chapter of Blacks In Government Day."

BIG was organized in 1975 as a non-profit organization that functions as a knowledgeable, problem solving organization for black civil servants.



Left: (left to right) Johnny Reising, DOE Fernald associate director, shows a model of the OSDF to Gene Jablonowski, US EPA, Sherri Robinson, DOE director Portsmouth and Graham Mitchell, Ohio EPA. (6810-D0472).

EPA brings Fernald and Portsmouth together

At the suggestions of Ohio and U.S. EPA representatives from DOE-Portsmouth, Bechtel Jacobs, U.S. and the Ohio EPA visited Fernald to discuss elements of on-site waste storage including the design, construction and operation of an on-site waste facility. DOE and Fluor Fernald managers from the Soil and Disposal Facility Project presented information and lessons learned from the three-year operation of Fernald's On-Site Disposal Facility

(OSDF). In addition to the technical presentations, stakeholder acceptance and expectations regarding on-site waste storage and future OSDF challenges such as long-term monitoring and maintenance and funding uncertainties were discussed. The afternoon included a tour of the OSDF and the rest of the site. Graham Mitchell, Ohio EPA commented that the visit was "a good exchange of information from Fernald to Portsmouth."

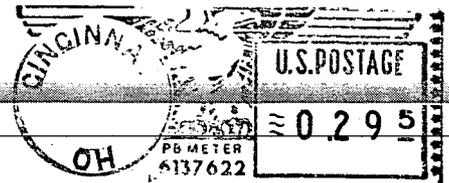
At the conclusion of the visit, Sherri Robinson, DOE director at Portsmouth, said, "We're looking forward to establishing a relationship with the Fernald office and also to transferring some of their lessons learned to Portsmouth."

Fifth Annual DOE Public Tour

On Tuesday, May 8, the fifth annual DOE Public Tour will be held in conjunction with Fernald's 50th Anniversary. Visitors are encouraged to arrive at the site at 5:30 p.m. to visit the displays and hear about the history of the site and the local area. Each visitor will receive a book called "Fernald at 50", and a one-hour documentary that includes excerpts taken from interviewees for the Fernald Living History project. The site tour will start at 6:15 p.m. For more information or to register for the tour, call 513-648-5883 or email: jeannie.foster@fernalddoe.gov.

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PRESORTED
STANDARD



New documents - Public Environmental Information Center

The following information was added to the Public Reading Room, Administrative Record files and Post Record of Decision files at DOE's Public Environmental Information Center (PEIC):

- Soil Characterization and Excavation Project
 - ◆ USEPA Letter: On-Site Disposal Facility Enhanced Permanent Leachate Transmission System Tie-In Plan
 - ◆ OEPA Letter: Comments on Calculations for Dumped Rock Fill for On-Site Disposal Facility
 - ◆ Systems Plan - Collection and Management of Leachate for the On-Site Disposal Facility
 - ◆ USEPA Letter: Area 1, Phase III Implementation Plan
 - ◆ USEPA Letter: Area 3A Stockpile Waste Acceptance Criteria Report
 - ◆ OEPA Letter: Conditional Approval - Certification Design Letter for Area 9, Phase I (Dated 02/22/2001)
- Silos Project
 - ◆ OEPA Letter: Comments - Accelerated Waste Retrieval Remedial Design Package
 - ◆ USEPA Letter: Silos 1 and 2 Accelerated Waste Retrieval Project Updated Construction Activities
- Aquifer Restoration Project
 - ◆ OEPA Letter: Approval November Re-Injection Operating Report
- Miscellaneous
 - ◆ Consolidated Consent Agreement / Federal Facility Compliance Agreement / Federal Facility Agreement / Remedial Investigation/Feasibility Study / Consent Decree Monthly Report for the Period of January 1, 2001, through January 31, 2001
 - ◆ USEPA Letter: Integrated Environmental Monitoring Report 3rd Quarter 2000
 - ◆ Integrated Environmental Monitoring Plan Revision 2 Final January 2001

Note: This does not represent the complete list of new documents added to the PEIC for the months of January and February. Contact the PEIC, 513-648-7480 for a complete list of new documents.



Fernald Report

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