

ferald

Inside

Report

May / June 2002

- **It's complete-**
9.1 million pounds
of product out the door
- Silos on the move
- Fernald's PA receives
national recognition



message from

Steve McCracken

Fernald responds to Top-to-Bottom Review

In April, representatives from the Ohio Field Office, Fernald and Fluor sat down with DOE Environmental Management (EM) Assistant Secretary Jessie Roberson to discuss our strategy as it applies to the Top-to-Bottom Review. Specifically we addressed the Assistant Secretary's four main recommendations from the review: improve DOE's contract management; move to an accelerated risk-based cleanup strategy; align internal processes to support cleanup; and realign EM program scope to support cleanup and closure.

Actions we have taken or will take to reduce risk, cost and improve safety while working toward project completion in 2006 are in alignment with the above four recommendations and include:

- Implement our 2006 Closure Baseline
- Streamline contract requirements
- Partner with regulators and stakeholders to implement step improvements
- Seek consolidation strategies at other DOE site to more cost-effectively address select Fernald waste streams

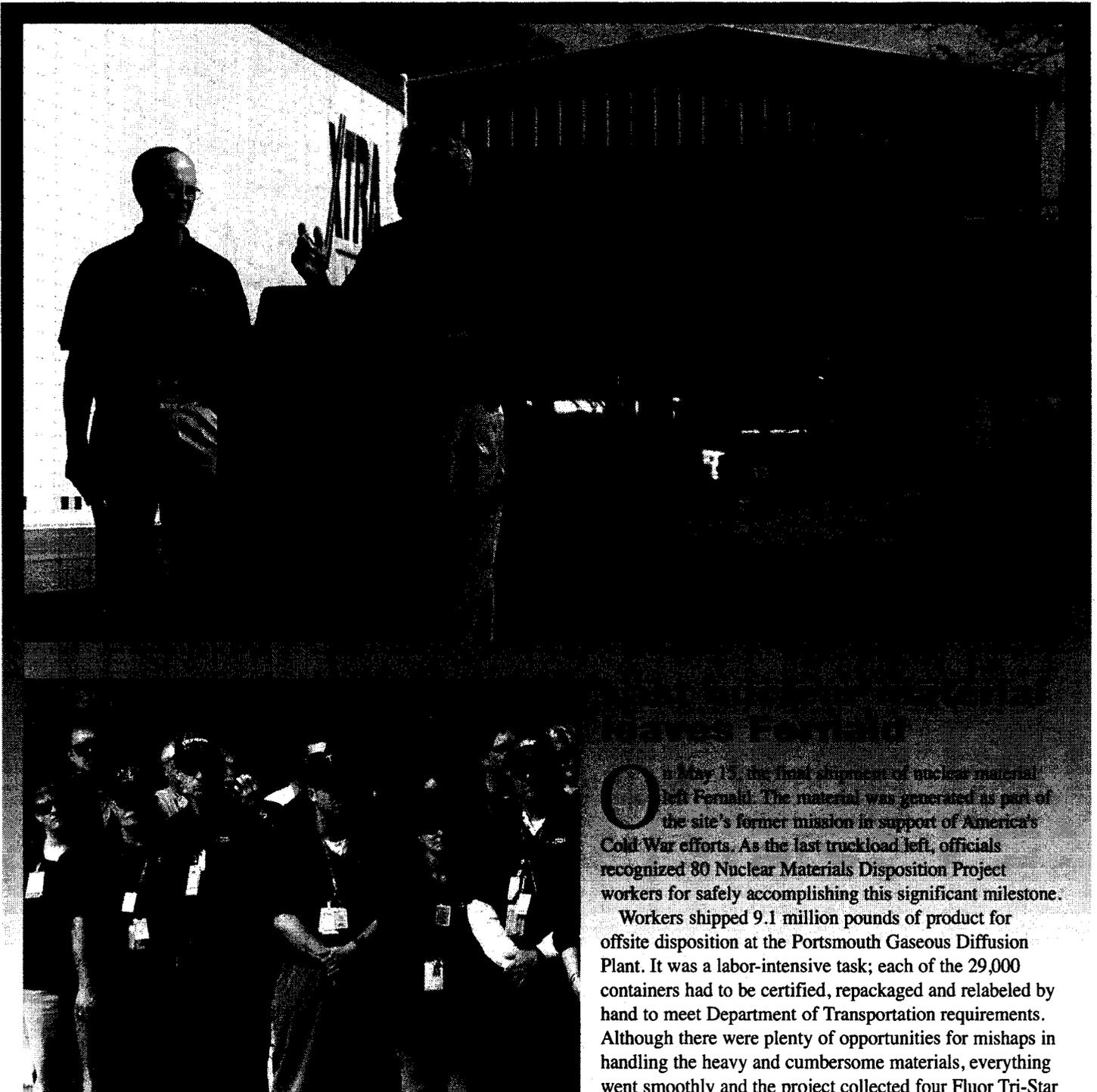
As you can see, Fernald's response is active. We are not allowing events to control us, rather we are identifying and removing all obstacles that could interfere with our 2006 closure strategy. We were very fortunate to have the opportunity to discuss our plans in detail with Assistant Secretary Roberson. I think her visit to Fernald in late January was valuable because it gave her a real appreciation for what we've completed, our plans to finish the job and

the importance of stakeholder participation in planning and executing our cleanup. I think our presentation to Assistant Secretary Roberson was sound and overall I feel confident that the Top-to-Bottom Review will work for Fernald.



Steve McCracken
Director, DOE-Fernald

On the cover: (Top – left to right) Dale Jackson, DOE-Oakridge Office of Nuclear Fuel Security and Uranium Technology director, and Don Paine, Fluor Fernald Nuclear Materials Disposition director applaud as Steve McCracken (bottom right), DOE-Fernald director presents the final nuclear materials shipment manifest to Robert Sizemore, the Ranger Trucking Company driver who will carry the final shipment to Portsmouth, OH. Sizemore is a member of Ranger's Million Mile Club due to his outstanding driving and safety records (7368-d0510).



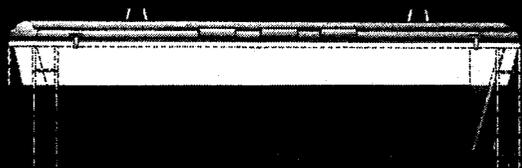
Above: Don Paine (top right), Fluor Fernald Nuclear Materials director and Steve McCracken (top left), DOE-Fernald director congratulate the Nuclear Materials Disposition team (bottom) for completion of the site milestone and most of all the outstanding safety record the team achieved over the course of the three year project (7368-d0496) (7368-d0495).

On May 13, the final shipment of nuclear material left Fernald. The material was generated as part of the site's former mission in support of America's Cold War efforts. As the last truckload left, officials recognized 80 Nuclear Materials Disposition Project workers for safely accomplishing this significant milestone.

Workers shipped 9.1 million pounds of product for offsite disposition at the Portsmouth Gaseous Diffusion Plant. It was a labor-intensive task; each of the 29,000 containers had to be certified, repackaged and relabeled by hand to meet Department of Transportation requirements. Although there were plenty of opportunities for mishaps in handling the heavy and cumbersome materials, everything went smoothly and the project collected four Fluor Tri-Star Awards for outstanding safety performance.

Thanks to the planning and coordination of the Oak Ridge, Portsmouth and Fernald staffs, 760 trucks, about six shipments a week, made the trip to the Portsmouth Gaseous Diffusion Plant in southeastern Ohio. The project began in June 1999.

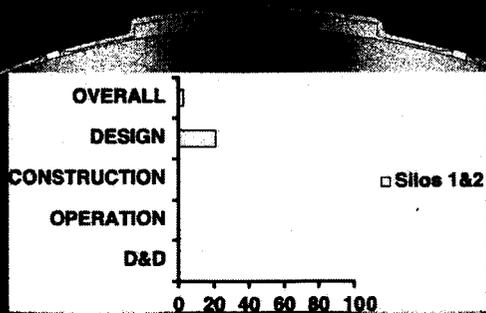
Cleanup **Progress** Update



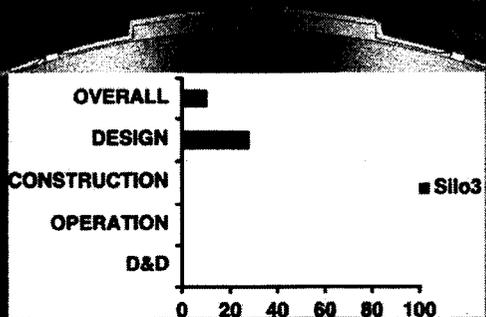
46%

Waste Pits Remedial Action Project (WPRAP)

- Safely transported trains (#54 - #56) to Envirocare of Utah during March/April
- Received delivery of 20 additional railcars, bringing the total to 190
- Initiated operation of the Pugmill Ventilation System to control airborne radioactivity emissions; concurrently, initiated a follow-up monitoring plan to measure the effectiveness of this and other controls
- Completed a Pit 4 waste excavation Standard Startup Review



Silos 1 and 2
4%



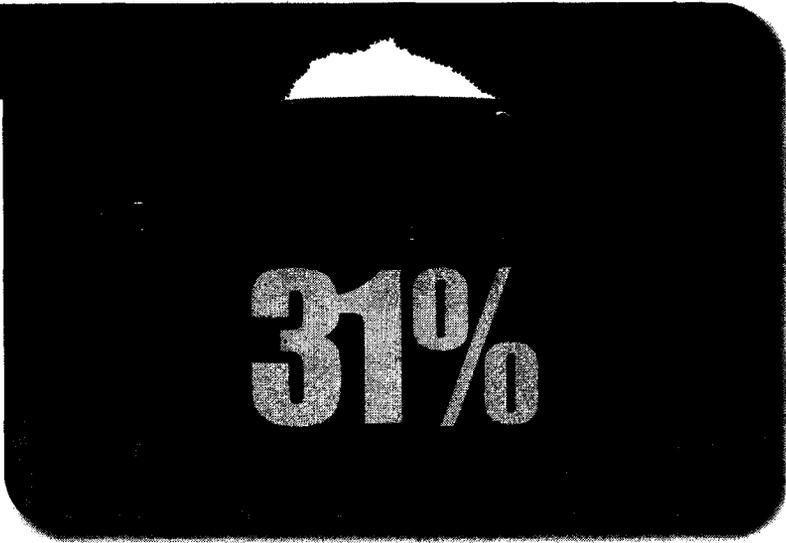
Silo 3
8%

Silos Project

- Erected the lower elevations of structural support steel for the Radon Control System (RCS) Building
- Finished construction on three of the four tanks in the Transfer Tank Area, completed hydro testing on Tanks 1A and 1B and began interior sandblasting
- Poured the concrete shielding slab for worker protection above the Radon Control System Air Handling Building and constructed the carbon bed concrete enclosures and Solid Waste Retrieval System piperack foundations
- Silos 1 and 2 engineers issued the treatment facility Preliminary Design Package for formal review and comment
- Silos operations, maintenance, and engineering personnel, in cooperation with the DOE Office of Science and Technology, finalized the cold loop test plan for bulk sluicing
- DOE is reviewing the Remedial Design package outlining treatment strategies for Silo 3
- As part of an ongoing evaluation process, the Silo 3 team contacted other sites regarding their use of soft-sided containers for waste disposal
- Conducted radon permeability testing on Silo 3 packaging material

Soil and Disposal Facility Project

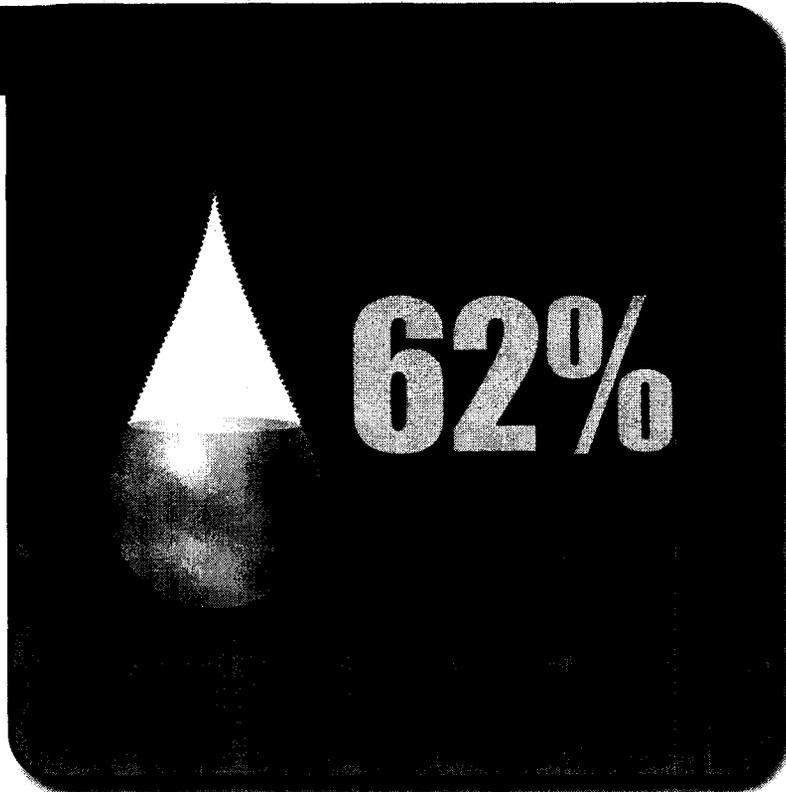
- Opened the On-Site Disposal Facility (OSDF) Cells 2 and 3 and placed 26,000 cubic yards of impacted material
- Continued liner construction on Cells 4 and 5 and excavation of soil in the production area
- Continued arsenic hotspot excavation in Area 2 Phase II
- Started top soil amendment and spring planting as part of the Southern Waste Units restoration
- Continued bulk debris staging at the On-site Material Transfer Area; over 1300 rolloff boxes emptied to date
- Completed construction of an emergency access road



31%

Aquifer Restoration/Wastewater Project

- Continued design of the injection wells, which will replace existing Injection Wells 8 and 9 and enhance the groundwater cleanup
 - Performed rotonic borings at new injection well locations to obtain information for wellscreen sizing and purchase
 - Completed construction, testing, and startup of the Pilot Plant Drainage Ditch plume wellfield module, which includes an additional well in the northeast corner of the South Field
 - Continued South Field Phase II module extraction and injection well planning and design
 - Continued off-property South Plume geoprobing to evaluate impact of pumping operations completed to date
 - Completed replacement pipeline construction; the line runs from the biosurge lagoon to south of the K-65 trench and will allow for demolition of the trench.
- February/March totals: extracted 315,397,000 gallons of groundwater; treated 202,219,000 gallons and removed 140 net pounds of uranium from aquifer



62%

Cleanup **Progress** Update



47%

Demolition Projects

Decontamination & Demolition (D&D)

- Plant 6 Complex
 - ◆ Completed all field work
 - ◆ Ongoing preparation of closure documentation and demobilization
- Multi-Complex (Plants 2, 3, 8 and General Sump)
 - ◆ Completed structural demolition of Buildings 2F, 8B and 8H
 - ◆ Ongoing activities 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
 - ◆ Began asbestos abatement and removal of atrium glass in the Health & Safety Building
 - ◆ Began mobilization in Building 64/65
- Facilities Shutdown
 - ◆ Began utility disconnects in the Safety & Health Building (53A)



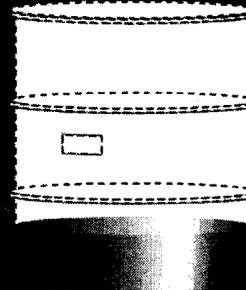
99%

Nuclear Materials Disposition Project

- Product Shipments to DOE-Portsmouth
 - ◆ Completed packaging of all product materials for shipment to Portsmouth.
 - ◆ Total of 3,531 MTU or 97 percent of the total volume shipped since project inception in June 1999
- Other Product Disposition activities
 - ◆ Completed shipment of materials for private sector sale (76 MTU)
- Uranium Waste Disposition
 - ◆ Continued characterization and visual inspection of containers
 - ◆ Continued packaging of materials for shipment to the Nevada Test Site
 - ◆ Made three shipments to NTS, for a total of 2143.7 cu.ft., of uranium compounds

Waste Management Project

- **Liquid Mixed Waste Bulking Project**
 - ◆ Shipped Batch 11 liquid mixed waste to the Toxic Substance Control Act (TSCA) Incinerator
 - ◆ Submitted supplemental lab sample analysis results for the Batch 12 liquid mixed waste application to the TSCA Incinerator and the State of Tennessee
- **Inorganic Treatment Project**
 - ◆ Continued construction on the Mixed Waste Processing Enclosure, which will be used to process and package the Inorganic Treatment Project waste



88%

Fernald Shipments – March / April 2002

Contents / Destination	Shipment Mode	Number of Shipments	Monthly Total	FY02 Total	Approximate Project Totals
Low-Level Waste (Nevada Test Site)		11	11,997 cu. ft.	160,410* cu. ft.	6.12 million cu. ft.
Mixed Waste - Materials & Energy Corporation at Oak Ridge		0	0 cu. ft.	1,039 cu. ft.	1,039 cu. ft.
Liquid Mixed Waste - Toxic Substance Control Act Incinerator at Oak Ridge		2	5,465 gal.	5,465 gal.	147,360 gal.
Nuclear product/materials (Portsmouth)		44	152,654 net lbs. or 58.7 metric tons uranium	425,7884 net lbs. or 171.7 metric tons uranium	9,057,871 net lbs. or 3,531.2 metric tons uranium
Soil and debris - On Site Disposal Facility		N/A	26,000 in-place cubic yards	56,560 in-place cubic yards	689,554 in-place cubic yards
Waste Pits Project (Envirocare of Utah, Inc.)		3 unit trains (183 railcars)	19,694 tons	64,909 tons	350,495 tons

* Figure was adjusted to reflect 17 shipments made at the end of FY01, which weren't received at NTS until FY02.

works at the silos

Crews are now completing final welding on the last of the four transfer tanks in the Transfer Tank Area (TTA) near Silos 1 and 2. In April, engineers hydro-tested tanks 1A and 1B by filling them with water to insure they were leakproof. Crews will test the remaining two tanks in May.

The tanks will hold the 8,900 cubic yards of Silos 1 and 2 material, plus sluice water used in the retrieval process. The material will stay in safe storage in the tanks until the treatment facility is operational. Bridges over Silos 1 and 2 will support sluicing and pump modules. Sluice jets inside the silos will mix waste material with water and slurry pumps will push the resulting material through double containment piping into the transfer tanks.

According to the accelerated cleanup plan, remotely-operated systems in the treatment facility will dewater and chemically stabilize and solidify the waste and load it into sealed cylindrical steel containers. These containers will then be placed into shielded gondola cars and shipped by unit trains to a licensed commercial disposal facility. Treatment operations are scheduled to begin in February 2005 and end February 2006.

The Silos 1 and 2 team must clear a few hurdles before beginning the project. First they must prepare an Explanation of Significant Differences (ESD) that will modify the current Record of Decision (ROD) to allow the option of disposal at a permitted commercial waste disposal facility. The current ROD specifies disposal at the Nevada Test Site. Secondly, the team must insure the availability of railcars and on-site rail facilities. Fernald is developing alternate scenarios to ensure smooth operations.

Similar hurdles confront the Silo 3 team. The accelerated plan calls for pneumatic waste retrieval, during which crews will vacuum the loose dry material out of the silo, followed by mechanical excavation of any compacted material in the structure. A remotely-operated system will load the untreated material into sealed plastic liner bags, which will then be placed into DOT-certified lift liner bags. Each package will then be lifted into cargo containers and shipped to a permitted waste disposal facility on flatbed railcars attached to Waste Pit unit trains. Operations are scheduled to begin in March 2003 and end in September of the same year.

The original Silo 3 Explanation of Significant



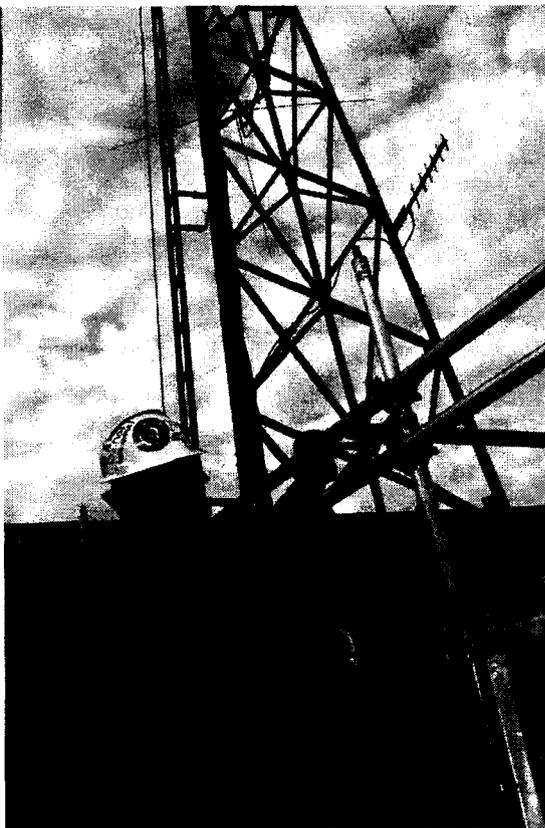
Differences (ESD) document specified meeting RCRA limits for metals and the disposal facility Waste Acceptance Criteria (WAC) by chemically stabilizing or encapsulating the waste. The Silo 3 team must now prepare a ROD amendment that calls for treatment only to the extent required by the off-site disposal facility's WAC.

Above: A worker rigs structural steel in the Radon Control System Building near Silos 1 and 2 (7385-d1611).

Building presents challenges

Preparations are underway for the dismantlement and demolition of the Health and Safety Building. With the removal of asbestos floor tile, steam piping and supports, countless light bulbs and ballasts, and remaining laboratory fume hoods, MACTEC continues to prepare for using the track-mounted equipment that will tear down the building. The debris will be loaded into roll-off boxes and transported to the On-Site Disposal Facility for final disposition.

Although the demolition will be controlled, the process will be challenging because of the building's close proximity to the Service Building to the west, the invivo facility to the south and the antenna tower and radio hut to the north. The surrounding structures must not sustain damage, as they are still in operation. An antenna tower is located only a few feet from the building and supports site operations and emergency response communications equipment.



Left: Sam Gambrel, a Wise Services laborer constructs a barrier around the antenna tower. The barrier is used to prevent damage to the tower during D&D activities (7565-d0070).



Prior to taking over the manager role at Ohio, Susan Brechbill served as chief legal advisor for DOE at Hanford (7737-d0056).

Brechbill retires as Ohio Field Office Manager

After 33 years of public service with the Department of Energy and its predecessor agencies, Ohio Field Office Manager Susan Brechbill retired from the top post at Ohio on May 3. The DOE offered Brechbill the Deputy Assistant Secretary position for Project Completion in Washington, D.C., but she declined the offer in order to spend more time with her family and enter business in the private sector.

Since July 4, 1999, Brechbill has helped oversee the Fernald cleanup and was instrumental in establishing a closure contract at the site. "I make this decision to retire with a little regret and much excitement. The regret is to leave my job as the Manager of the Ohio Field Office, a job I love, with some major actions yet undone. I have never been one to choose to leave in the middle of a job. However, I also recognize that at a field office, there will always be things in process and things are never all done, at least not until 2006 in Ohio when closure will be accomplished," said Brechbill.

Fernald Public Affairs Department recognized nationally

The Fernald Public Affairs Department came into being in 1985 when the sites former contractor, National Lead of Ohio (NLO), was facing its most difficult times. The community was outraged when site officials disclosed to the public that dust collectors in Plant 9 had malfunctioned and released nearly 300 pounds of uranium into the environment and the community. At the time, there



were no site contacts to call if residents had questions and no public forums in which to discuss concerns.

The Public Affairs Department, small as it was then, initiated public outreach and involvement programs and Fernald's relationship with its neighbors began to improve. Since then, the department has won nearly 80 awards, including Best Community Relations Program from the Public Relations Society of America in 1988 and the Public Participation Organization of the Year Award from the International Association for Public Participation in 1999.

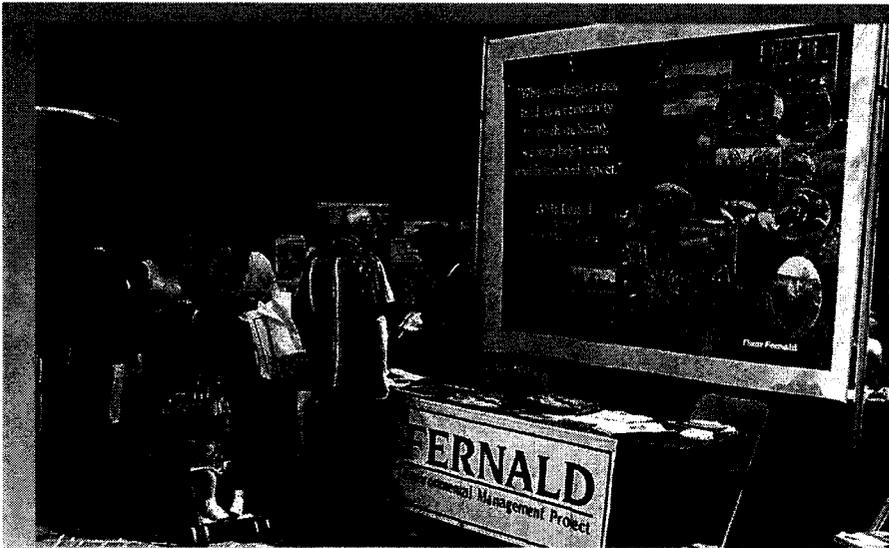
The department is still winning awards. Last year, Fernald commemorated its 50th anniversary with a ceremony honoring workers, former workers, area residents and former landowners. Public Affairs produced a book, "Fernald at 50: From Weapons to Wetlands" and an hour-long video documentary, "First Link: A Story of Fernald" that describe the history of Fernald as told by those who lived it. The book recently received an Honorable Mention in the National Association of Government Communicators Blue Pencil Awards and a Crystal Award of Excellence, the highest honor, from the Communicator Awards. The documentary received a Gold Aurora Award, an Aegis Award of Excellence, and a Communicator Crystal Award of Excellence.



Public access to detailed technical data about the site is essential, but community members prefer to receive the majority of information in user-friendly, graphics-rich formats.

This workshop was part of a comprehensive DOE-sponsored project on public access to site records.

Above: Ric Strobl (left), manager of Fluor Fernald's Multimedia Visual Services, discusses photo archives with attendees at the Future of Fernald IV meeting (7760-d0016).



Above: For the sixth year in a row, Fernald participated in Cincinnati's Earth Day celebration. Sue Walpole and other volunteers talked to the many visitors at the Fernald exhibit (7775-d0002).

THIS YEAR IS YOUR YEAR...

Every year all over the country celebrates Earth Day events to recognize national and local efforts that educate people about working together to preserve the planet's health. Cincinnati celebrated the 32nd anniversary of Earth Day Thursday, April 18 on Fountain Square in the heart of the city at an event sponsored by the Greater Cincinnati Earth Coalition. Fluor Fernald was a primary corporate sponsor and had one of the many environmental exhibits at the event.

Sycamore High School places fourth at National Science Bowl®

Sycamore High School, Fernald's entry in the National Science Bowl®, placed fourth at this year's national competition. The team advanced earlier this year from a regional Science Bowl® competition hosted by the Department of Energy and Fluor Fernald. The Sycamore High School team members are: Danny Ash, Karthik Balasubramanian, Daniel Cheng, Fima Macheret, Lee Rashkin and coach Cindy Parrott.

"96 percent" was the short answer to a question on genetics that clinched the 2002 National Science Bowl® championship for the Thomas Jefferson High School for Science and Technology team from Alexandria, VA. The team also won a two-week trip to England to attend the International Youth Science Forum. Sycamore High School will attend a one-week research trip to upstate New York for a mixture of science and fun, as well as a visit to the General Electric Global Research and Development Center. The top 18 teams also received \$1,000 for their school's science department.

Secretary of Energy Spencer Abraham congratulated the winners and praised the more than 300 students who competed. "I believe in



encouraging talented, scientific minds to develop their skills with the goal of one day leading our Nation's research activities," Secretary Abraham said. "I know you will add to the future success of our scientific endeavors and will enhance our country's ability to maintain a position of leadership in math and science."

Twelve thousand students from 1,800 schools participated in 64 regional competitions this year. The Department of Energy created the National Science Bowl® in 1991 to encourage high school students to excel in math and science and to pursue careers in these fields. The department supports math and science education to help provide a technically trained and diverse workforce for the agency and the nation.

Above: The winning Sycamore High School team is presented the fourth place trophy by Under Secretary Robert Card at the National Science Bowl® (7741-d35).

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 Comments – Conditional Approval of Waste Pit Liners Investigation
 - ◆ DOE Letter – Direct Haul of Bulk Waste Materials to the Waste Pits Remedial Action Project
- Soil and Disposal Facility Project
 - ◆ Project Specific Plan for Area 3A/4A Excavation Characterization and Precertification
 - ◆ DOE Report - Certified-For-Construction Technical Specification for On-Site Disposal Facility Phase IV Project Number 20104
- Decontamination and Demolition Project
 - ◆ Approval of Task Order Implementation Schedule for Above-Grade Decontamination and Dismantlement of Component 18M Under the Miscellaneous Small Structures D&D Project Implementation Plan
 - ◆ DOE Letter - Operable Unit 3 Laboratory Complex Implementation Plan for Above-Grade Decontamination and Dismantlement
- Silos Project
 - ◆ DOE Letter – 11(E)(2) Byproduct Waste Stream Certification for Fernald Environmental Management Project Silos Material
- Aquifer Restoration Project
 - ◆ OEPA Approval – December 2001 Re-injection Operating Report
 - ◆ OEPA Approval – Approval of the Project Specific Plan for Three New Injection Wells
- Miscellaneous
 - ◆ Resource Conservation and Recovery Act Annual Treatability Study Report
 - ◆ DOE Letter – Consolidated Consent Agreement /Federal Compliance Agreement/Federal Facility Agreement/Remedial Investigation/Feasibility Study/Consent Decree Monthly Report for the Period March 1, 2002 Through March 31, 2002 Including Anticipated Work for the Period April 1, 2002 Through April 30, 2002

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



Fernald Report

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