

# FERNALD CLEANUP PROGRESS BRIEFING

## FEBRUARY 2002

6:30 p.m. Opening Remarks	Gary Stegner
Fernald Citizens Advisory Board	Jim Bierer
Technology Programs	Kathleen Nickel
Soil & Disposal Facility Projects	Rob Janke
Aquifer Restoration/Wastewater Project	Rob Janke
Decontamination & Demolition	John Trygier
Silos Project	Nina Akgunduz
Waste Generator Services	Pete Yerace
Nuclear Materials Disposition	Pete Yerace
Waste Pits Remedial Action Project	Dave Lojek
Explanation of Significant Difference	Terry Hagen & Don Paine
Question and Answer Session	
8:30 p.m. Adjourn	

# TECHNOLOGY PROGRAMS

## EM-50 Reorganization

- Established Two New Priority Areas (Thrusts)
  - Thrust 1
    - Multidisciplinary teams committed to assisting closure sites
    - Dedicated budget to ensure resources available
    - Technical expertise to recommend best approach
  - Thrust 2
    - Alternative approaches to high cost and high risk baselines
- Streamlined and delayered - proposal process will be shorter and less complex

# TECHNOLOGY PROGRAMS

## 2002 EM-50 Projects

- Accelerated Site Technology Deployments
  - Vacuum Assisted Thermal Desorption System - \$3.2M
  - Portable Waste Repackaging Unit - \$800,000
  - Waste Material Processing System - \$840,000

# TECHNOLOGY PROGRAMS

## 2002 EM-50 Projects

- Lead Acid Battery Treatment - \$50,000
- Fernald Repackaging System - \$1M
- Fernald Post Closure Stewardship Technology Project - \$840,000

# TECHNOLOGY PROGRAMS

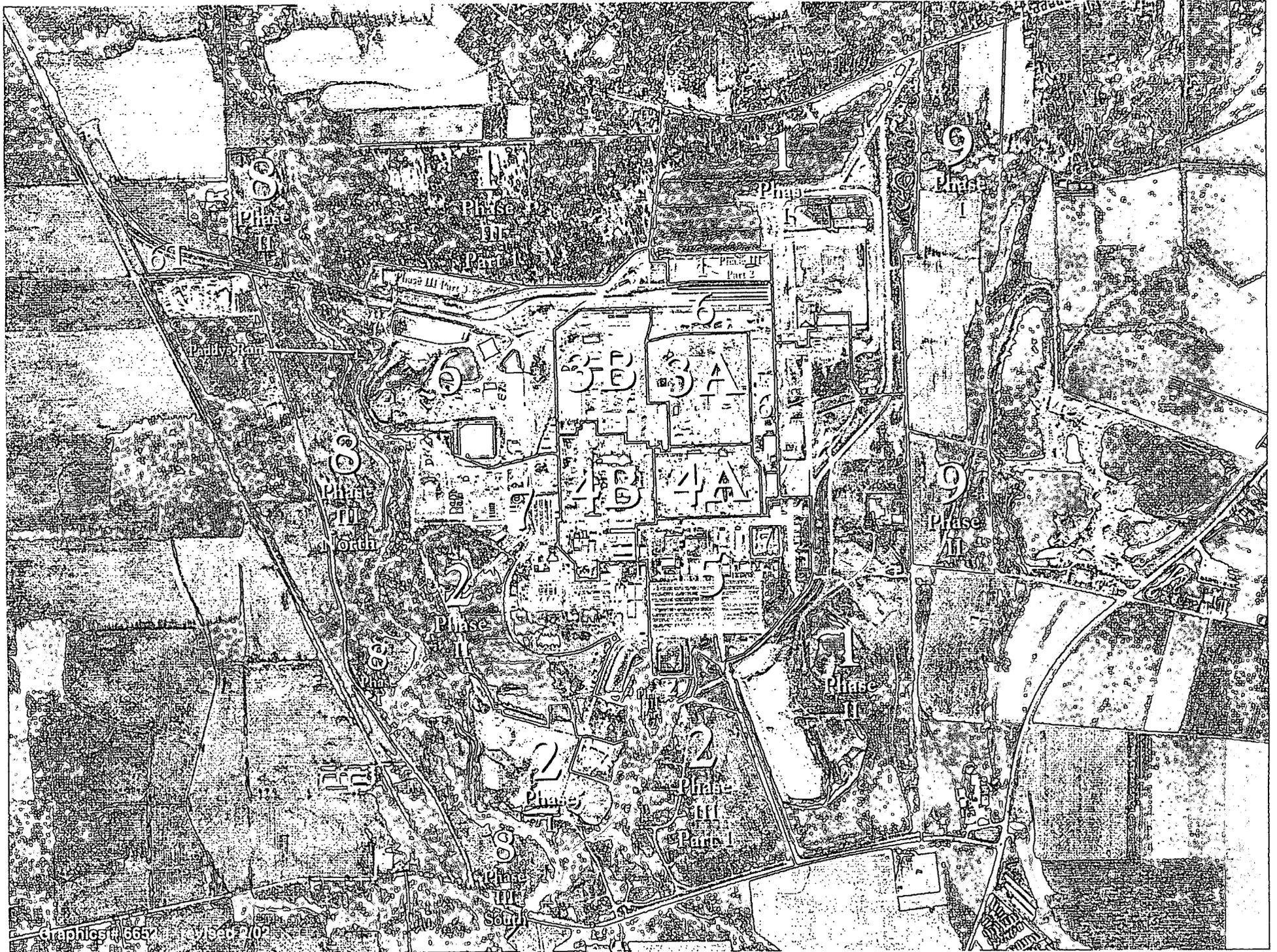
## Additional EM-50 Initiatives

- Silos Project Cold Loop Test
  - Test and select various types of pumps
  - Test strategies for optimal “mining” of Silos materials
  - Validate critical velocity and settling velocity for sluicing and retrieval operations

# PROJECT NEWS

## SOIL & DISPOSAL FACILITY PROJECT

- Completed construction of Cell 1 cap
- Continuing site preparation work for Cells 4 and 5
- Continuing efforts to build an emergency access road
- Planned remediation activities:
  - Construction of liners for Cells 4 and 5
  - Placement of 232,000 cubic yards of impacted materials
  - Perimeter work at Southern Waste Units
  - Excavation in 3A/4A in former production area

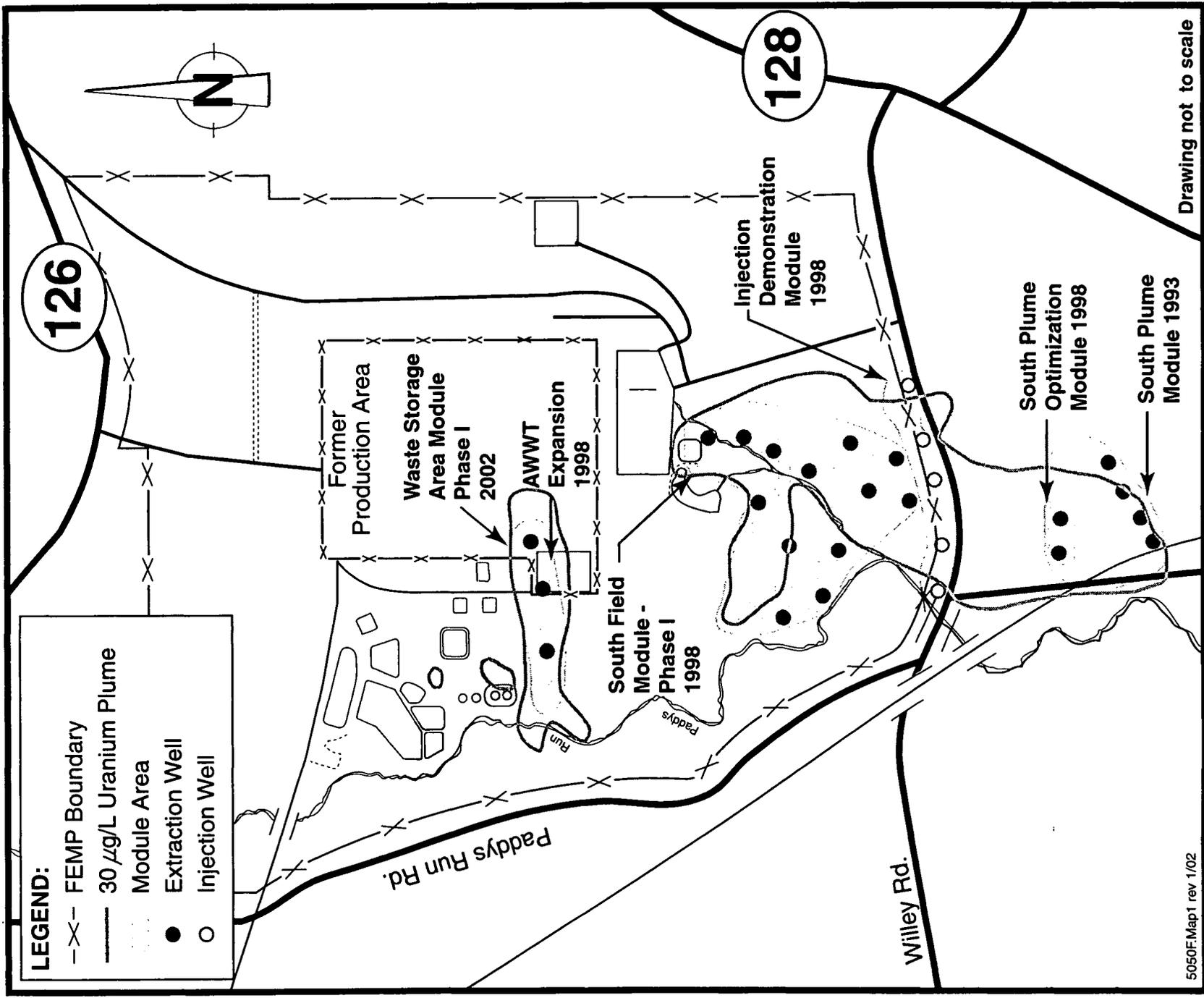


# PROJECT NEWS

## AQUIFER RESTORATION/ WASTEWATER PROJECT

- Continuing construction of Waste Storage Area Extraction Wells 26, 27, 28
- Continuing construction of Supplemental Well 25 in the South Field
- Progressing on the South Field Phase II Design Report which includes three extraction wells; one injection well; and two infiltration basins for re-injection
- Pursuing geoprobing in the South Plume portion of the aquifer

# CURRENT AQUIFER RESTORATION MODULES & WELL LOCATIONS

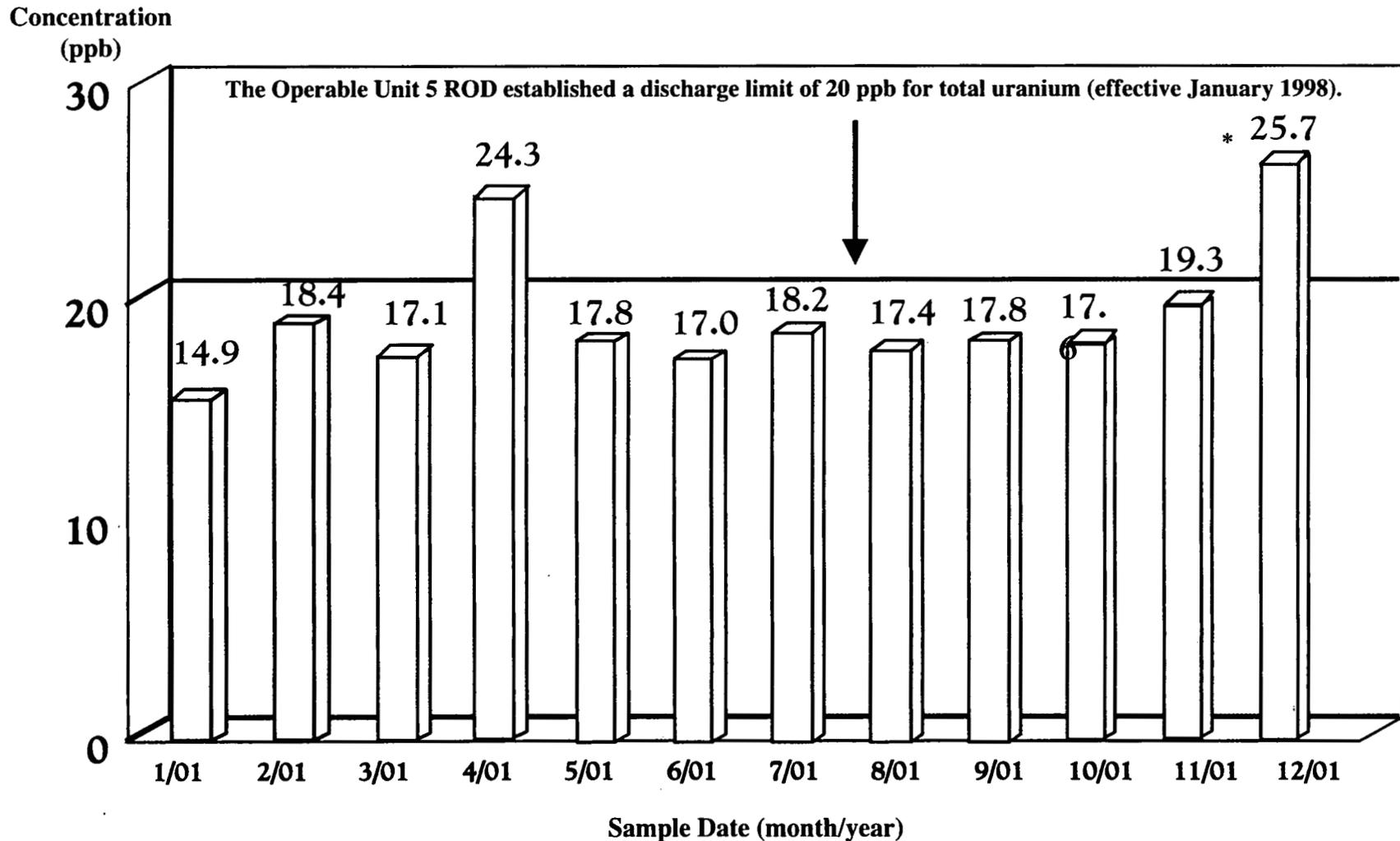


5050F:Map1 rev 1/02

Drawing not to scale

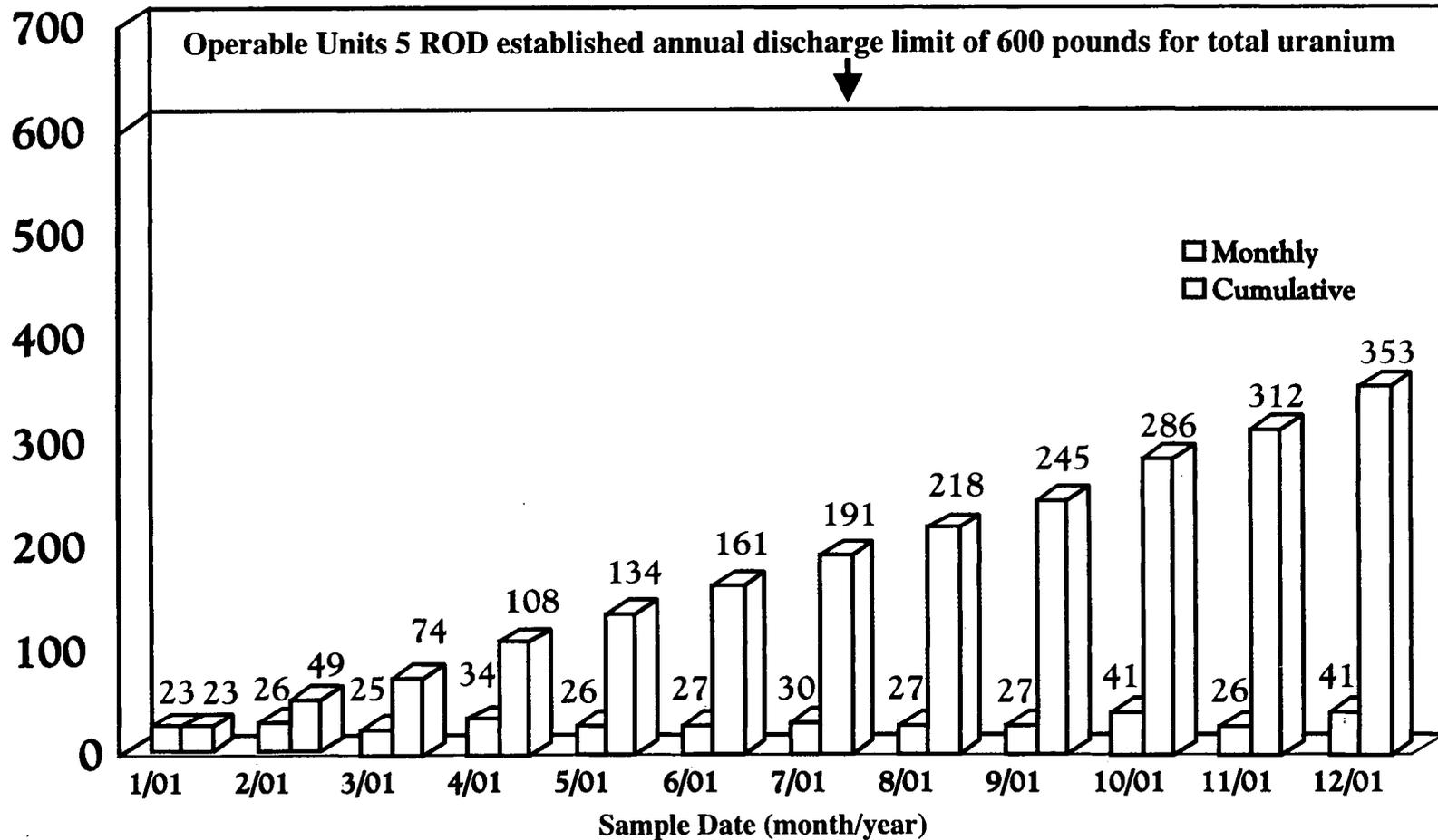
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# AVERAGE MONTHLY TOTAL URANIUM CONCENTRATION DISCHARGED TO THE GREAT MIAMI RIVER IN 2001



# POUNDS OF URANIUM DISCHARGED TO THE GREAT MIAMI RIVER IN 2001

Weight (pounds)



Note: Sum of monthly discharges may not always agree with cumulative total because of rounding differences.



# PROJECT NEWS

## DECONTAMINATION & DEMOLITION

- Plant 6
  - Completed structural demolition of Metals Fabrication Plant and Plant 6 Sump
  - Continuing size reduction of debris and placement into roll-off boxes for disposition

# PROJECT NEWS

## DECONTAMINATION & DEMOLITION

- Multi Complex – Plants 2, 3, 8 and General Sump
  - Completed Maintenance Building, Railroad Filter Building, Drum Conveyor Shelter, Soil Washing Building and Cold Side Ore Conveyor
  - Establishing building enclosures and vestibules
  - Removed equipment, piping, exterior transite, windows, debris and structural steel

# PROJECT NEWS

## DECONTAMINATION & DEMOLITION

- **Miscellaneous Support Activities**
  - Began utility disconnects in Safety & Health Building
  - Completed relocation of the site telephone system, Communication Center and Medical Department

# PROJECT NEWS

## SILOS PROJECT

### Accelerated Waste Retrieval Project

- Completed due diligence review of Radon Control System and “balance of plant”
- Initiated design changes to address due diligence findings
- Continuing erection of tanks in Transfer Tank Area

# PROJECT NEWS

## SILOS PROJECT

### Silos 1 and 2 Final Remediation Project

- Completed conceptual design
- Continuing container design and data development testing
- Continuing preliminary design package preparation
- Continuing investigation of direct rail transport of treated waste to Envirocare

# PROJECT NEWS

## SILOS PROJECT

### Silo 3 Project

- Completed conceptual design package; issued for formal DOE and Critical Analysis Team review
- Completed geotechnical testing performed by Jenike and Johanson to determine the material's ability to flow and other physical characteristics
- Continuing preparation of Remedial Design package

# PROJECT NEWS

## WASTE GENERATOR SERVICES

- Low-Level Waste
  - Shipped 60,295 cubic feet to Nevada Test Site to date in FY02
  - Performed venting and decanting of thorium legacy waste containers
  - Completed movement of thorium containers from Building 64/65 to new storage location on Plant 1 Pad

# PROJECT NEWS

## WASTE GENERATOR SERVICES

- Waste Treatment and Waste Storage
  - Completed bulking and sampling of more than 18,000 gallons of liquid mixed waste in Batch 12
  - Awaiting approval from Tennessee to ship Batch 11
  - Preparing organic mixed waste shipments to Materials & Energy Corp. in Oak Ridge
- Completed over 3.2 million hours without a lost-time injury
- Streamlining work processes for packaging and shipping of wastes

# PROJECT NEWS

## NUCLEAR MATERIALS DISPOSITION

- Nuclear product shipments to Portsmouth
  - Shipped 87.5 metric tons uranium (MTU) in FY 02
  - Shipped total of 3,447 MTU to date
  - Equates to 95 percent of revised overall project goal of 3,624 MTU
- Approved contract for private sector sale of 76 MTU in January

# PROJECT NEWS

## NUCLEAR MATERIALS DISPOSITION

- Uranium waste materials
  - Continuing characterization/visual inspection of containers
  - Continuing packaging of depleted uranium metal and fissile-excepted uranium compounds for shipment to the Nevada Test Site
- Safety Accomplishments
  - Completed 100,000 hours worked without an Occupational Safety and Health Administration “recordable” event
  - Surpassed 400,000 consecutive safe work hours

# PROJECT NEWS

## WASTE PITS REMEDIAL ACTION PROJECT

- Rail transportation
- Waste pit excavation
- Dryer operations

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# PIT 3

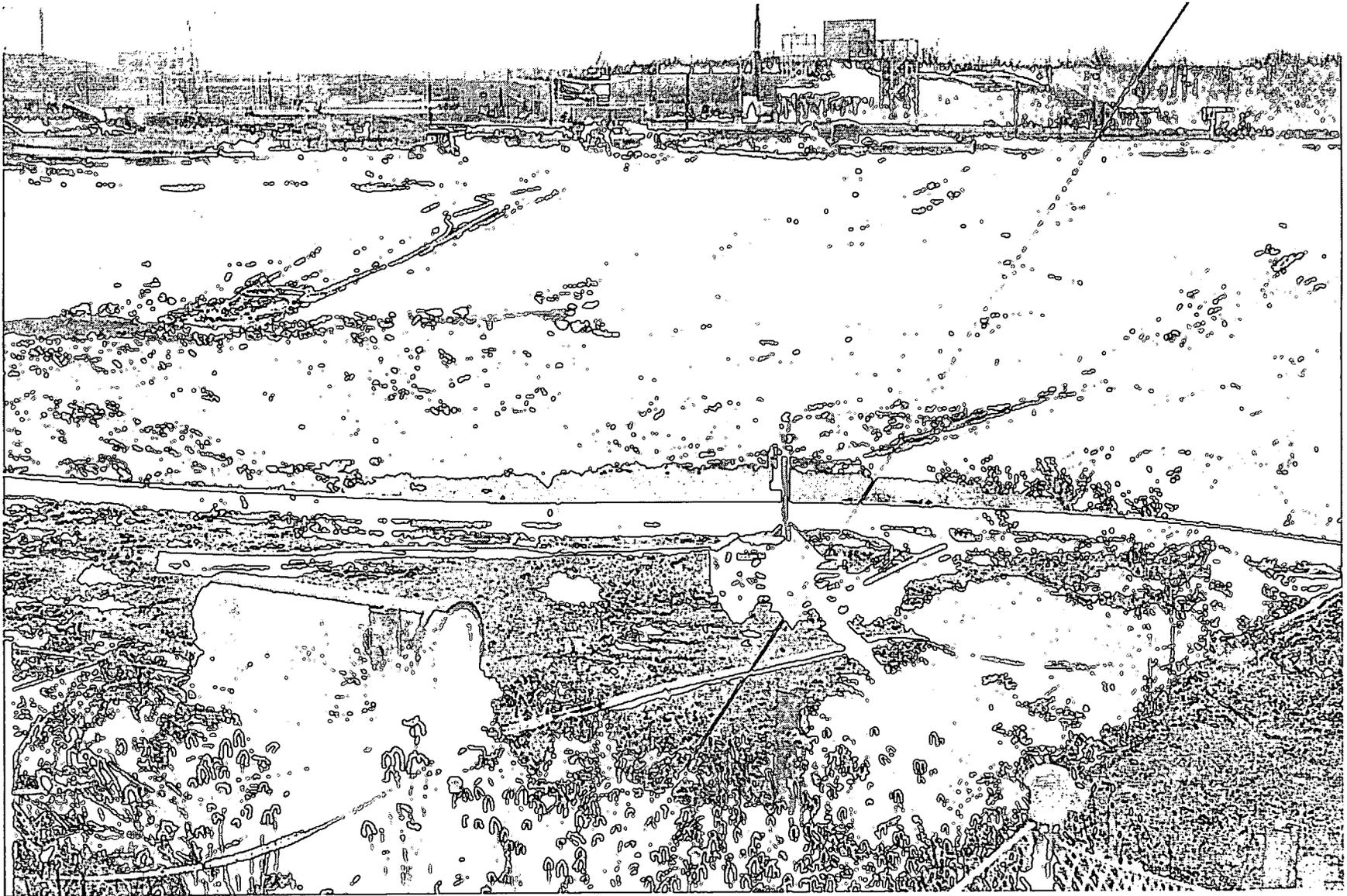


Graphics # 7418.1B 2/02 Photo # 6944D-1929

Photo taken December 2001

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PIT 3



Graphics # 7418.1C 2/02 Photo # 6944D-1928

Photo taken December 2001

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# PIT 3



Graphics # 7418.1D 2/02 Photo # 6944D-1927

Photo taken Deember 2001

# WASTE PITS REMEDIAL ACTION PROJECT EXPLANATION OF SIGNIFICANT DIFFERENCE

What are we proposing?

- To use the remedial facilities/processes of the Waste Pits Remedial Action Project to process/dispose other Fernald waste streams

# WASTE PITS REMEDIAL ACTION PROJECT

## EXPLANATION OF SIGNIFICANT DIFFERENCE

Why are we making this proposal?

- Allows for bulk rail shipment instead of shipment of individual containers by truck
- Bulk rail transportation is safer due to lower total shipment mileage
- Bulk rail transportation is cheaper due to economies of scale offered by bulking

# WASTE PITS REMEDIAL ACTION PROJECT

## EXPLANATION OF SIGNIFICANT DIFFERENCE

What “other Fernald waste streams” are we talking about?

- The Operable Unit (OU) 5 Record of Decision(ROD) allows use of WPRAP to dispose of above-OSDF WAC soil
  - Managed approximately 50,000 tons of OU5 soil to date
- Soil and containerized waste from other areas
  - Low-level radiological and chemically-contaminated soil
  - Low-level waste residues
  - Low-level enriched uranium waste

# WASTE PITS REMEDIAL ACTION PROJECT EXPLANATION OF SIGNIFICANT DIFFERENCE

What waste streams are we not talking about?

- Any waste from outside Fernald
- Any RCRA hazardous waste
- Any waste that would negatively impact WPRAP's ability to meet the requirements of the OU1 ROD

# WASTE PITS REMEDIAL ACTION PROJECT EXPLANATION OF SIGNIFICANT DIFFERENCE

## Nuclear Material Disposition (Example Waste Streams)

- 9,373 MTU in inventory as of December 1, 1992  
(20,658,092 uranium pounds)
- Dispositioned 8,063 MTU as of February 1, 2002  
(17,770,852 uranium pounds)
- 1,310 MTU remain to be dispositioned  
(2,887,240 uranium pounds)

# WASTE PITS REMEDIAL ACTION PROJECT

## EXPLANATION OF SIGNIFICANT DIFFERENCE

### Nuclear Material Disposition

- 8,063 MTU shipped since 1992
  - Product Disposition:
    - 1,661 MTU sold to private sector
    - 3,447 MTU to Portsmouth
    - 21 MTU for DOE Programmatic use
  - Uranium Waste Disposition:
    - 1,972 MTU army-owned to NTS/Barnwell
    - 962 MTU to NTS

# WASTE PITS REMEDIAL ACTION PROJECT

## EXPLANATION OF SIGNIFICANT DIFFERENCE

### Nuclear Material Disposition

- 1,310 MTU remain in inventory
  - Product EPA Milestone - June 1, 2002
    - 76 MTU for private sector sale
    - 101 MTU to Portsmouth
  - Uranium waste EPA Milestone - December 31, 2005
    - 212 MTU waste compounds to NTS
    - 389 MTU waste metals to NTS
    - 84 MTU fissile compounds to Envirocare
    - 150 MTU fissile metal to NFS
    - 18 MTU RCRA compounds to off-site treatment
  - Low-level Waste: EPA Milestone - May 29, 2003
    - 280 MTU residues/trash to off-site disposal

# WASTE PITS REMEDIAL ACTION PROJECT

## EXPLANATION OF SIGNIFICANT DIFFERENCE

### Enriched Restricted Waste Mixing Project

- 2300 drums of contaminated waste
  - 1 percent to 5 percent enrichment
  - 425 tons
- Mixed with 12,000 tons of Pit 4 cap
- Discrete Ventilated Radiological Facility (10,000 square feet)
- Mixture loaded in existing railcars
- Shipped to Envirocare for disposal

# WASTE PITS REMEDIAL ACTION PROJECT EXPLANATION OF SIGNIFICANT DIFFERENCE

## Path Forward

- Finalize ESD consistent with public involvement - March 2002
- Issue fact sheet - March 2002
- Work with regulators to finalize implementation details

Where can you get more information about the workshop?

- Contact the Fernald Citizens Advisory Board at 513-648-6478
- Visit [www.fernaldcab.org](http://www.fernaldcab.org)
- For more information about the Fernald Environmental Management Project visit [www.fernald.gov](http://www.fernald.gov) or visit the Public Environmental Information Center, in the Delta Building at 10995 Hamilton-Cleves Highway.

*Future of Fernald workshops are conducted by the community and for the community. Participating community organizations include the Fernald Citizens Advisory Board, Fernald Living History, Inc., and Fernald Residents for Environment, Safety, and Health.*

## A STAKEHOLDER VISION FOR THE FUTURE OF FERNALD

*Adopted by Fernald Stakeholders at the Third Future of Fernald Workshop, September 26, 2000.*



Fernald Stakeholders envision a Future for the Fernald property that creates a federally-owned regional destination for educating this and future generations about the rich and varied history of Fernald. We envision a community resource that serves the ongoing information needs of area residents, education needs of local academic institutions, and reinterment of Native American remains. We envision a

safe, secure, and partially accessible site, integrated with the surrounding community that effectively protects human health and the environment from all residual contamination and fully maintains all aspects of the ecological restoration.

*Announcing the Fourth*  
**FUTURE OF  
 FERNALD  
 WORKSHOP:**  
*Exploring Long-Term  
 Public Access to  
 Site Records*

**Wednesday, March 13, 2002**

**6:30 p.m. to 8:30 p.m.**

**Crosby Senior Center**

**8910 Willey Road**



## What is the purpose of this workshop?



Future of Fernald Workshops provide citizens a direct voice in determining how the Fernald site will be managed when the remediation project is completed. This fourth workshop will address fundamental questions about current and future generations' access to information about the site. Through in-depth dialog and hands-on activities, we will

explore together the issues essential to implementing an on-site information center:

- What information should be preserved and made available concerning Fernald's history, the remediation project, and future conditions at the site?
- How should this information be stored, organized, and presented to be most useful to the community?
- If a public information and education center is built at the site, how should it be organized and what should it include?

## What records currently exist for the site?

Fifty years of activity at the site has generated a large volume of documents, photographs, videos, and artifacts. Due to a lawsuit, the DOE was not allowed to destroy any site records from 1986-2001. Today, the primary records storage facility for the site contains nearly 40,000 boxes, 100,000 photographs and over 26,000 videos, and even more information will be produced in the next few years.

## Why should you participate?

The Future of Fernald process is completely community driven. Participation by a broad representation of area residents has helped us to shape a future for this property that will ensure a positive legacy for years to come. Your participation will help ensure that future generations have the knowledge and resources to understand and learn from the past.

## What is the Fernald Environmental Management Project?

From 1951 through 1989, the U.S. Department of Energy (DOE) site in Fernald, Ohio produced uranium metals for the nation's nuclear weapons complex. Since that time, the DOE has been working to clean up contaminated soil and water at the site. Thousands of tons of waste and nuclear materials have been shipped off the site, while other low level waste has been placed in a specially designed on-site disposal facility. The majority of this environmental remediation project will be completed by about 2007. At that time approximately 800 acres of land will become available to implement the community's vision for the future use of the site.



## What will happen at the Fernald site when the remediation project is completed?

Future of Fernald workshops conducted over the past few years have resulted in a consensus community vision for the site which includes an on-site education center and reinterment of Native American remains (see back cover). Approximately 80 percent of the site will be dedicated to ecological restoration and will be accessible to the public. However, DOE will retain ownership of the property. The area surrounding the on-site disposal facility will be restricted and monitored in perpetuity to protect human health and the environment.



*The End is Just the Beginning*

# 8181 Public Records Questionnaire

In its ongoing efforts to plan for the use of the Fernald property following remediation, the Fernald Citizens Advisory Board (FCAB) Stewardship Committee will be holding the Fourth Future of Fernald workshop on March 13 at the Crosby Senior Center. Previous workshops resulted in a consensus community vision for the Fernald site that envisions the development of an on-site education center to provide area residents with historical documentation of the region and real-time information about environmental conditions at Fernald. This fourth workshop will focus on identifying the types of information most desired by the community at the proposed Education Center and the forms that it should take.

The FCAB is interested in your thoughts on these issues. The information you provide will help to prepare for the March 13 Future of Fernald Workshop. Thank you for your input.

**Please answer each question using the five point scale: 1 = not important,**

**2 = fairly important, 3 = important, 4 = very important, 5 = extremely important.**

**Use this self-mailer to return it to the FCAB, give it to an FCAB member, or fax it to 513-648-3629. Please return by 3/1/02.**

**1. How important is it to the Fernald area community to establish a public education and information center at the Fernald site following site remediation? .....**

Not important .....1  
Fairly important .....2  
Important .....3  
Very important .....4  
Extremely important .....5  
(circle one)

Not Sure

**2. How important is it that each of the following topics of information are included in Fernald Education Center?**

- Pre-1950 history of the site.....1
- History of uranium production at the site .....1
- Community History .....1
- Native American History in the Region .....1
- History and education on the local environment .....1
- Information about remediation at the site .....1
- Information about site conditions as finished .....1
- Information about site long term stewardship .....1
- Information about public health impacts .....1
- Environmental monitoring data as collected.....1
- Environmental and Natural Resource Education .....1
- Other: \_\_\_\_\_ 1

Not important

Fairly important

Important

Very important

Extremely important

Not Sure

Fernald Citizens Advisory Board  
6186 Old Franconia Road  
Alexandria, VA 22310

PLACE  
STAMP  
HERE

**3. What types of records and artifacts would you like to see preserved?**

- Short, plain language summaries of documents ..... 1      Not Important      2      Fairly Important      3      Important      4      Very Important      5      Extremely Important      Not Sure
- Original and complete documents ..... 1      2      3      4      5      Not Sure
- Original artifacts from the Fernald sites..... 1      2      3      4      5      Not Sure
- Original photographs ..... 1      2      3      4      5      Not Sure
- Digital photographs by computer access..... 1      2      3      4      5      Not Sure
- Videotapes of Fernald activities and history ..... 1      2      3      4      5      Not Sure
- Other: \_\_\_\_\_ 1      2      3      4      5      Not Sure

**4. What forms of information would you most like to see at an on-site education center?**

- Hard Copies of Records, Reports, and Documents ..... 1      Not Important      2      Fairly Important      3      Important      4      Very Important      5      Extremely Important      Not Sure
- Computer stations to access information ..... 1      2      3      4      5      Not Sure
- Web-based access to information ..... 1      2      3      4      5      Not Sure
- Other: \_\_\_\_\_ 1      2      3      4      5      Not Sure

*If you would like to be on the Future of Fernald mailing list, please include your name and address.*

Name \_\_\_\_\_

*Please circle one in each category.*

Address \_\_\_\_\_

Age: Under 20

21-35

36-50

Over 50

How close do you live to Fernald?

Less than 2 miles

2 - 5 miles

More than 5 miles

How long have you lived there?

Less than 3 years

3 - 7 years

More than 7 years

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Email \_\_\_\_\_

*For more information on the Future of Fernald and the March 13 Workshop, or to complete this questionnaire on-line, please visit [www.FernaldCAB.org](http://www.FernaldCAB.org)*