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**TRANSPORTATION PUBLIC WORKSHOP - JUNE 29, 1995, AGENDA  
AND HANDOUTS**

06/29/95

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PUBLIC

2037  
AGENDA

# TRANSPORTATION PUBLIC WORKSHOP

## June 29, 1995

### Agenda

- |                         |  |                    |
|-------------------------|--|--------------------|
| <b>7:00 - 7:20 p.m.</b> | <b>Introduction</b> <ul style="list-style-type: none"><li>- Welcome</li><li>- Review Agenda</li><li>- Purpose of Workshop</li></ul>  | <b>Dave Lojek</b>  |
| <b>7:20 - 7:40 p.m.</b> | <b>Waste Shipping Overview</b> <ul style="list-style-type: none"><li>- Total Waste Shipment Scope</li><li>- Legacy Waste</li></ul>   | <b>Dave Rast</b>   |
| <b>7:40 - 8:10 p.m.</b> | <b>Update on OU1 Transportation Plans</b> <ul style="list-style-type: none"><li>- Description of material to be shipped</li><li>- Transportation Route/Schedule</li><li>- Description of transportation method</li></ul> | <b>Bob Fellman</b> |
| <b>8:10 - 8:30 p.m.</b> | <b>Update on OU4 Transportation Plans</b> <ul style="list-style-type: none"><li>- Description of material to be shipped</li><li>- Transportation Route/Schedule</li><li>- Description of transportation method</li></ul> | <b>Mike Skriba</b> |
| <b>8:30 - 9:00 p.m.</b> | <b>Conclusion</b> <ul style="list-style-type: none"><li>- Future Public Involvement Opportunities</li></ul>  | <b>Dave Lojek</b>  |



# BACKGROUND

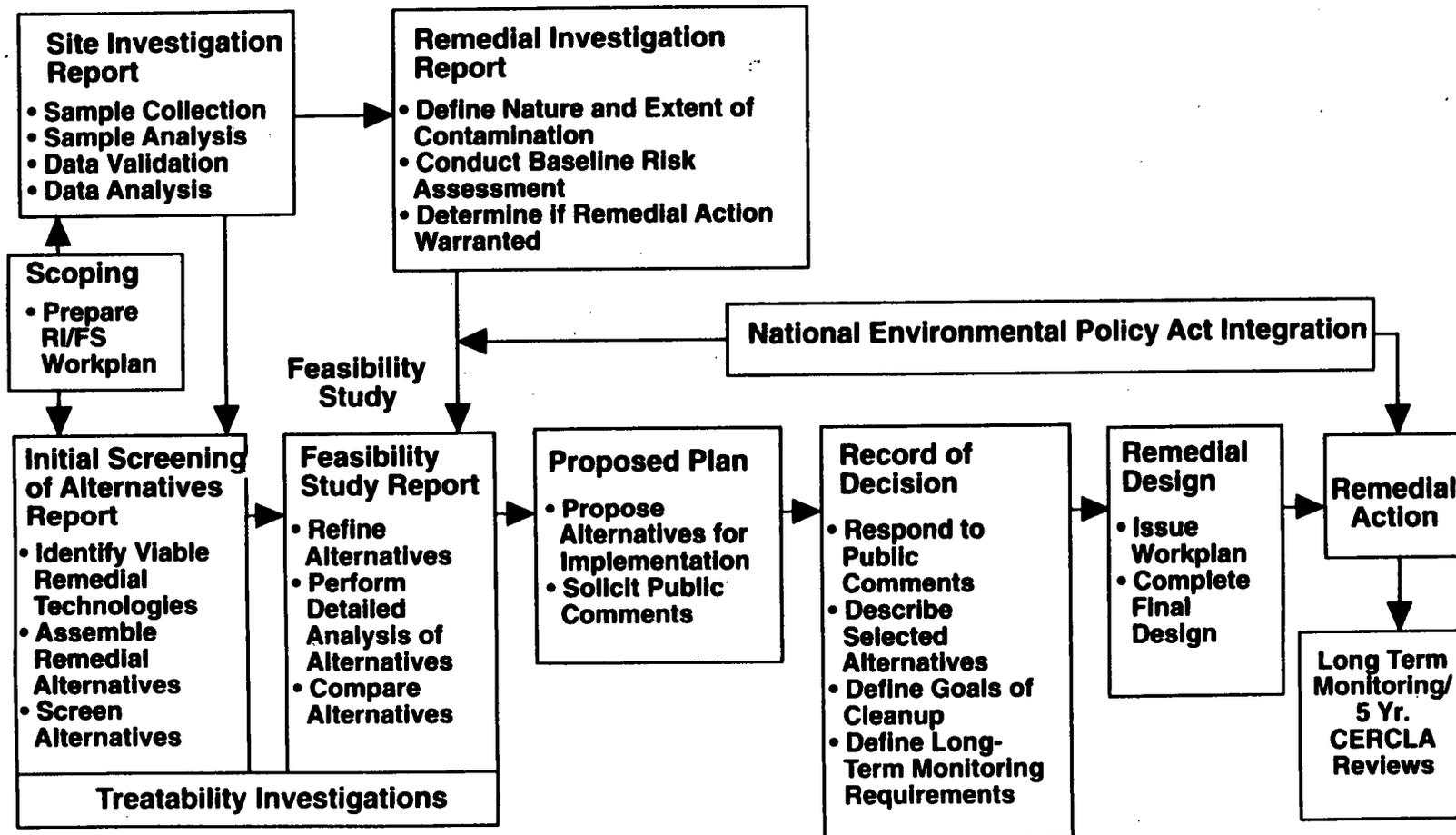
FERNALD

- **CERCLA Process -- Identifying the final cleanup for waste/material from Fernald**
  - **Some material will be disposed on-site**
  - **Other material will be transported off-site for disposal**
- **Focus of tonight's meeting addresses transportation of materials for off-site disposal**



# ENVIRONMENTAL RESTORATION PROCESS

FERNALD



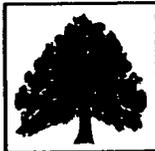


# PURPOSE OF MEETING

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**Provide update on three most significant waste transportation challenges at Fernald.**

- 1. OU1 materials transport by rail to a Permitted Commercial Disposal Facility**
- 2. OU4 materials transport by truck to the Nevada Test Site**
- 3. Legacy waste transport to the Nevada Test Site**



# **WHY THESE PROGRAMS ARE SIGNIFICANT TRANSPORTATION ISSUES**

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- **OU1 Volume**
- **OU4 Radiological levels**
- **Legacy waste radiological level and volumes**



## IMPORTANT TO NOTE

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- **One method of transportation does not fit for all areas of the site**
- **Must determine best method of transportation for type of waste material to be shipped**
- **There is more to transportation than the physical conveyance of the material**
- **Packaging, handling, exposures, etc. must also be considered**



# **IMPORTANT CRITERIA USED IN TRANSPORTATION DECISION-MAKING**

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- **Safety**
- **Stakeholder concerns**
- **Cost Effectiveness**
- **Description of waste material to be shipped and capabilities of disposal site**



# FERNALD WASTE VOLUME ESTIMATES

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<b>Remediation Waste -</b>	<b>3,852,000 cuyd</b>
<b>Legacy and Operations Waste -</b>	<b>250,000 cuyd</b>
<b>TOTAL</b>	<b>4,102,000 cuyd</b>



# COMPARISON WITH COMMERCIAL LLW DISPOSAL VOLUMES

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Site	Period	Disposal Volume (cuyd)
Barnwell, South Carolina	1962 - 1992	1,220,000
Richland, Washington	1965 - 1993	463,000
Beatty, Nevada	1962 - 1992	174,000
<b>TOTAL</b>		<b>1,857,000</b>



# FERNALD WASTE DISPOSITION

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Operable Unit	Description	Method of Transport	Ultimate Disposition
OU-1	Waste Pits	Rail	PCDF
OU-2	Other Waste Units	N/A	On-site
OU-3	Production Area	N/A	TBD
OU-4	Silos	Truck	Nevada Test Site
OU-5	Environmental Media	N/A	TBD



# LEGACY WASTE

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**Material: Drummed low-level waste, thorium and other product material**

**Volume (est.): 24,000 cuyd and 7,500 cuyd/year**

**Transportation: Truck**

**Destination: Nevada Test Site**

**Timeframe: Current (1995-2025)**

**Estimated Number of Shipments: 100-150/year**



# WASTE DISPOSAL

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## Waste Disposal Sites

- Nevada Test Site (NTS) - Las Vegas.....Low Level Waste
- Envirocare - Salt Lake City .....Mixed Waste

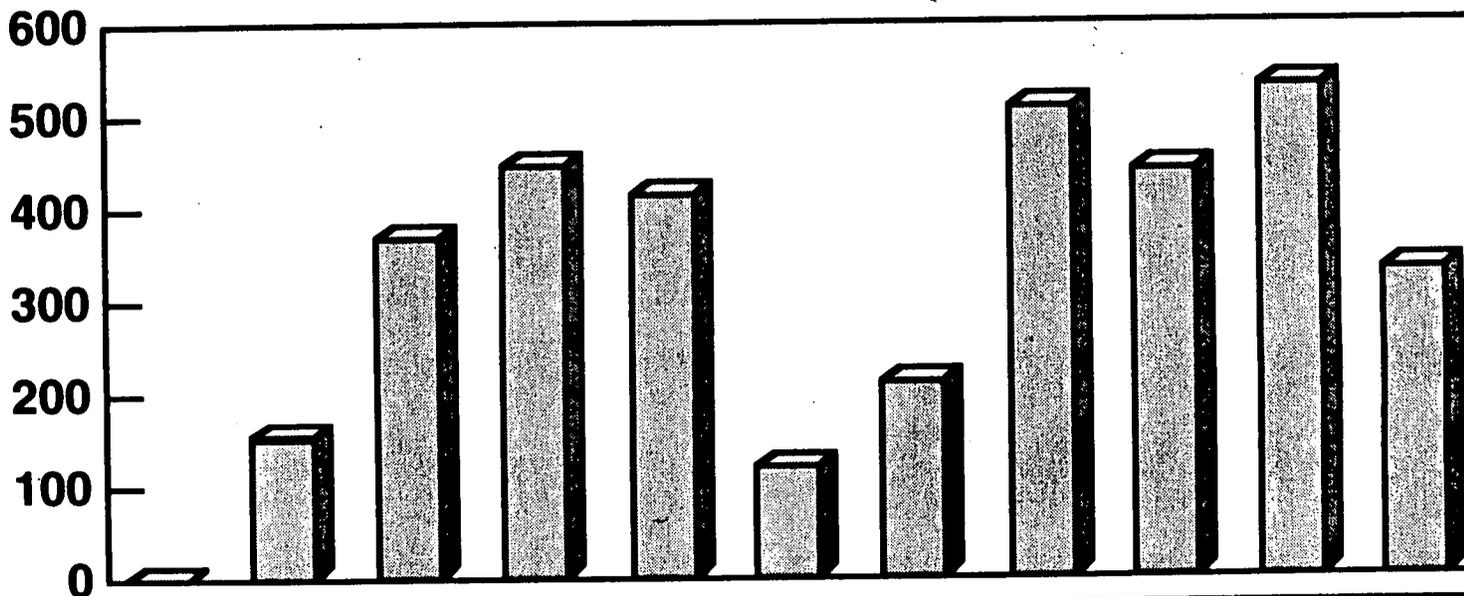


# PROGRAM HISTORY

FERNALD

## Number of Shipments

Number of Shipments Per Year



Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Shipments	4	154	369	454	421	120	211	511	448	538	383*

\* As a May 5, 1995

**Total - 3,613**

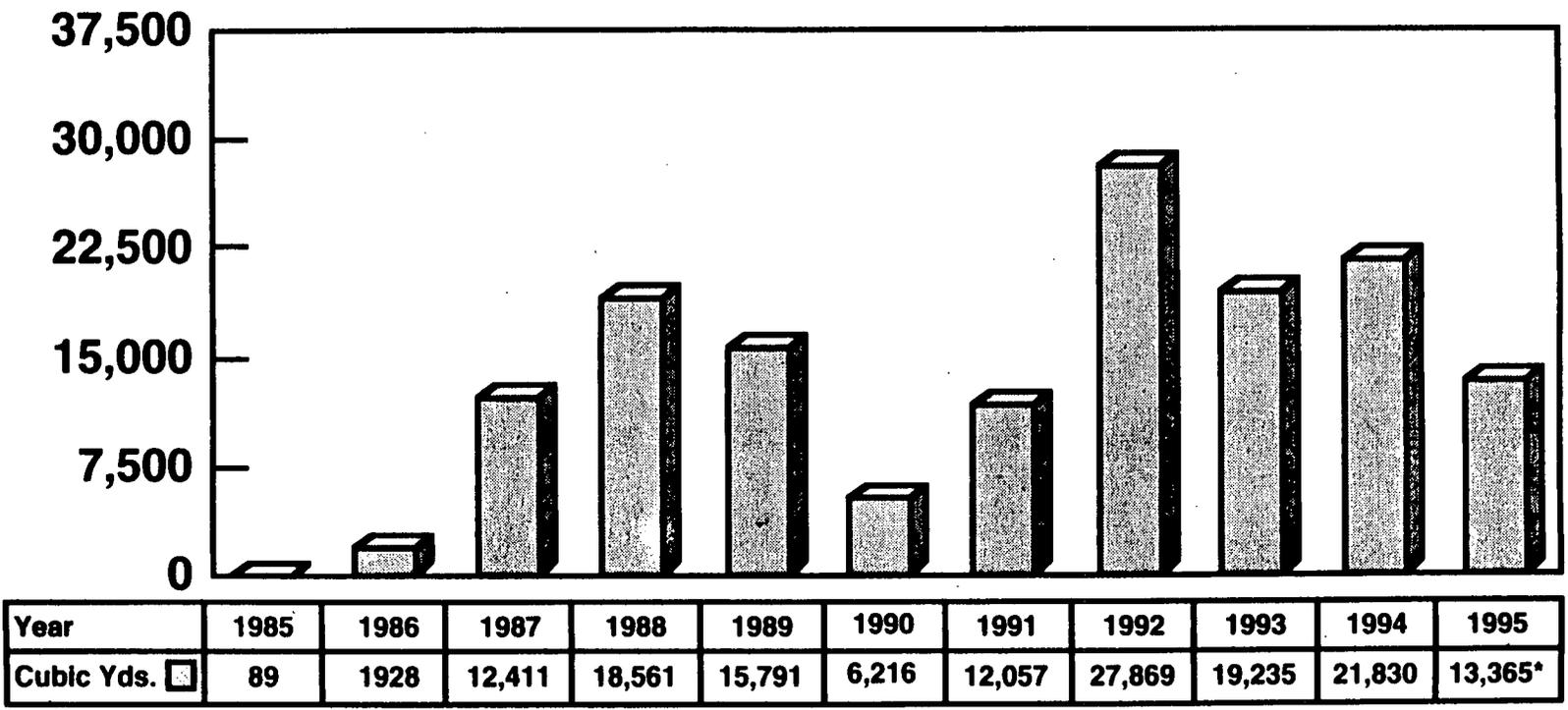


# PROGRAM HISTORY

FERNALD

## Total Cubic Yards

Total Cubic Yards



\* As a May 5, 1995

**Total - 149,352**



## **OPERABLE UNIT 1 - WASTE PITS**

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### **INCLUDES:**

- Waste Pits 1 through 6
- Clearwell
- Burnpit
- Berms, Liners and Soils Within the OU Boundary

### **OBJECTIVE:**

**Excavate, Treat by Thermal Drying, Ship (by rail) and Dispose Pit Waste and Highly Contaminated Soils at a Permitted Commercial Disposal Facility.**



# FACT SHEET ON OU1

FERNALD

- **Waste Pits 1-6, Burnpit and Clearwell**
  
- **Excavated Volumes:**
  - **628,000 yd<sup>3</sup> Waste**
  - **82,000 yd<sup>3</sup> Contaminated Soils**
  
- **Contaminants:**
  - **Radionuclides: Uranium, Thorium**
  - **Trace Metals**
  - **Trace Organics**
  
- **Disposal Quantity: ~ 700,000 Tons, Low Specific Activity (LSA) Materials**



# RAIL SHIPMENT

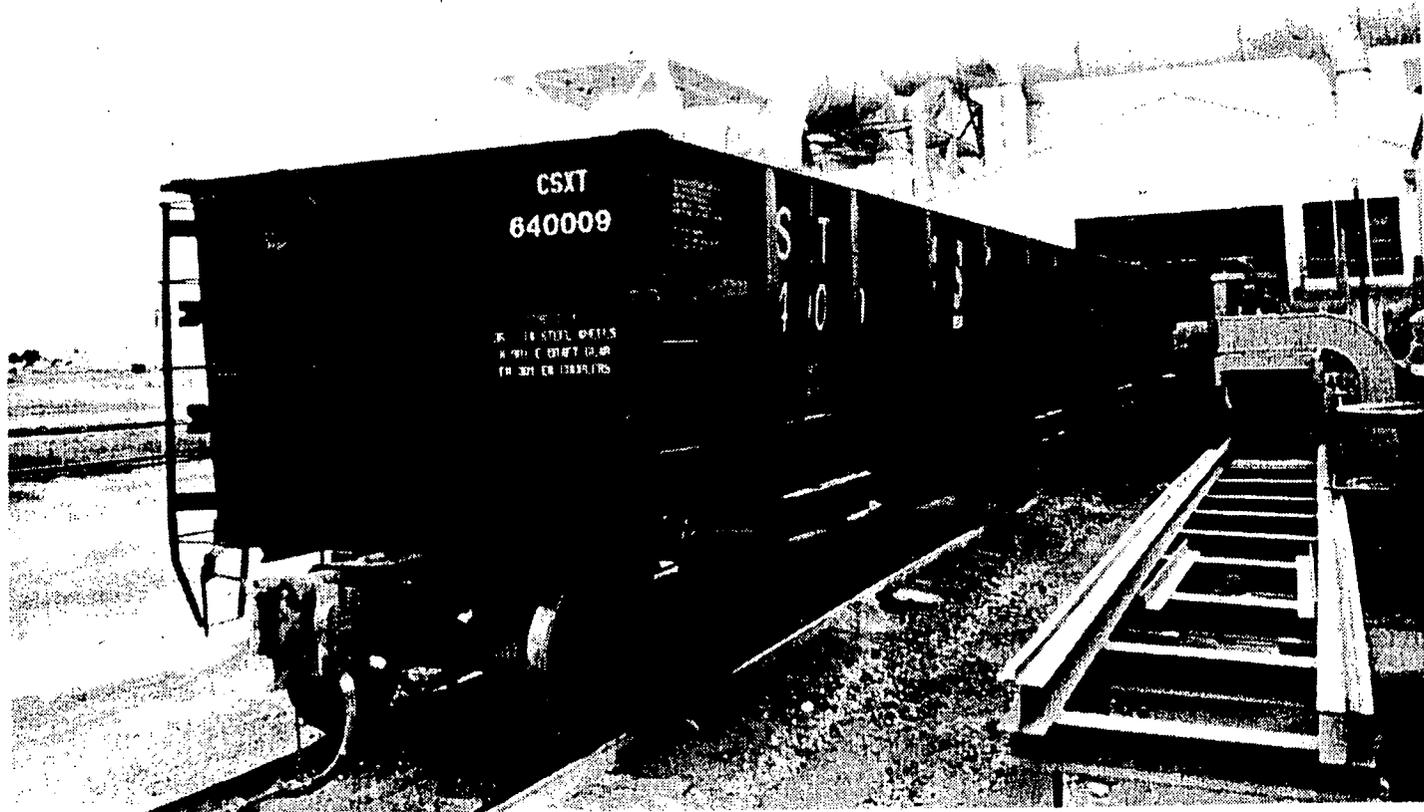
FERNALD

- **90 Tons of Waste Per Dedicated Gondola**
  - **110 Ton (Nominal) Capacity**
  - **Plastic Liners**
  - **Hard Covers (Steel or Fiberglass Reinforced Plastic)**
- **Most Probable Transportation Mode: Unit Trains**
- **Route**
  - **Fernald/Cottage Grove, IN**      **CSX Transportation**
  - **Cottage Grove/Cincinnati**      “
  - **Cincinnati/East St. Louis, IL**      “
  - **East St. Louis to PCDF**      **Union Pacific Railroad**



# GONDOLA CAR

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# UNIT TRAIN OF GONDOLA CARS

FERNALD



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# RAIL ROUTE TO ENVIROCARE

FERNALD



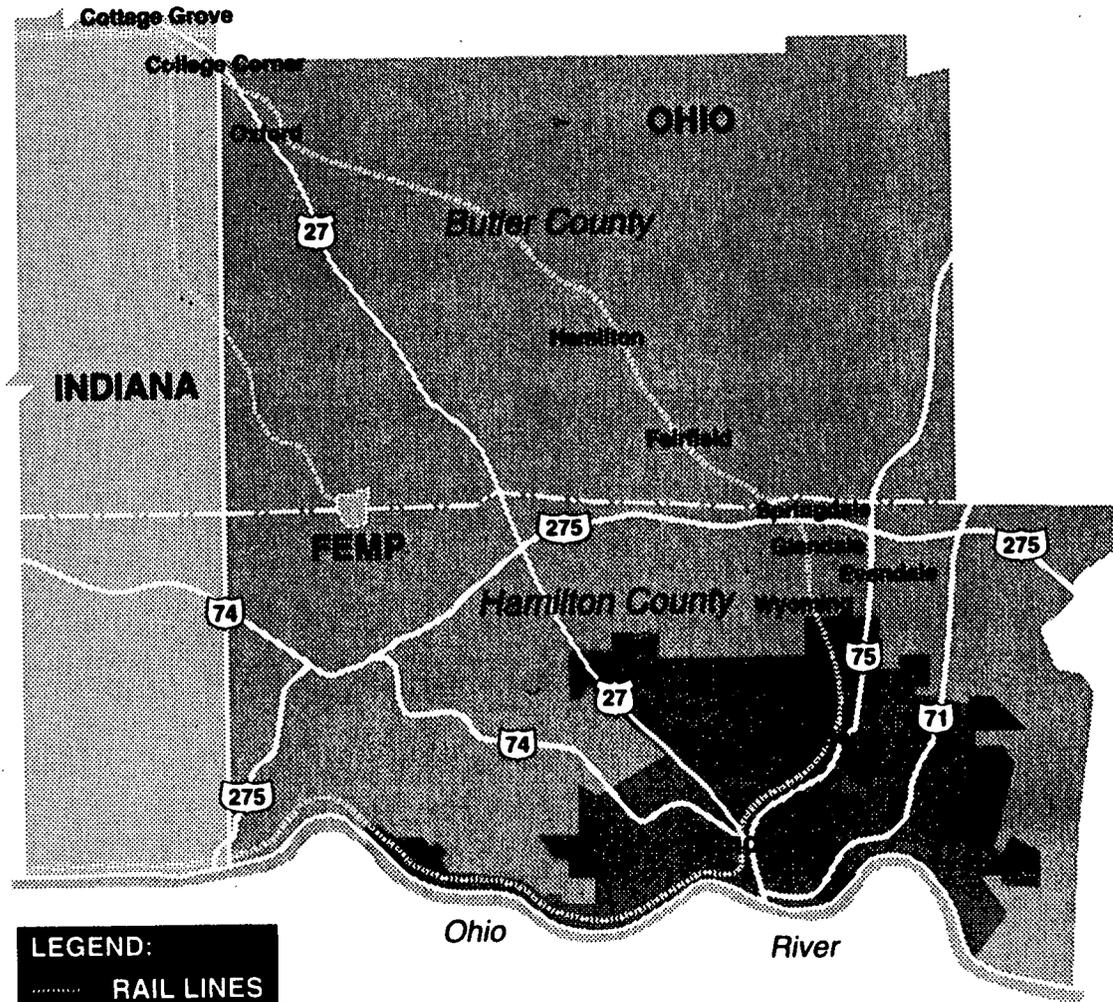
Legend:

- CSXT Railroad
- Union Pacific Railroad



# COTTAGE GROVE - CINCINNATI MAIN LINE

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# UNIT TRAIN RAIL TRAFFIC

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- **Traffic/Frequency of Shipments Is Dependent on Funding**
- **Frequency of Unit Train Shipments**
  - **180 Shipments Overall; 40 - 50 gondolas/unit train**
  - **Low Volume Year: 1 shipment every 5 months**
  - **High Volume Year: 2 shipments/month**



# RAIL CAR MANAGEMENT

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- **FEMP**

- **All Full and Empty Rail Cars Will Be Stored Within Fence, East of Paddy's Run Road**

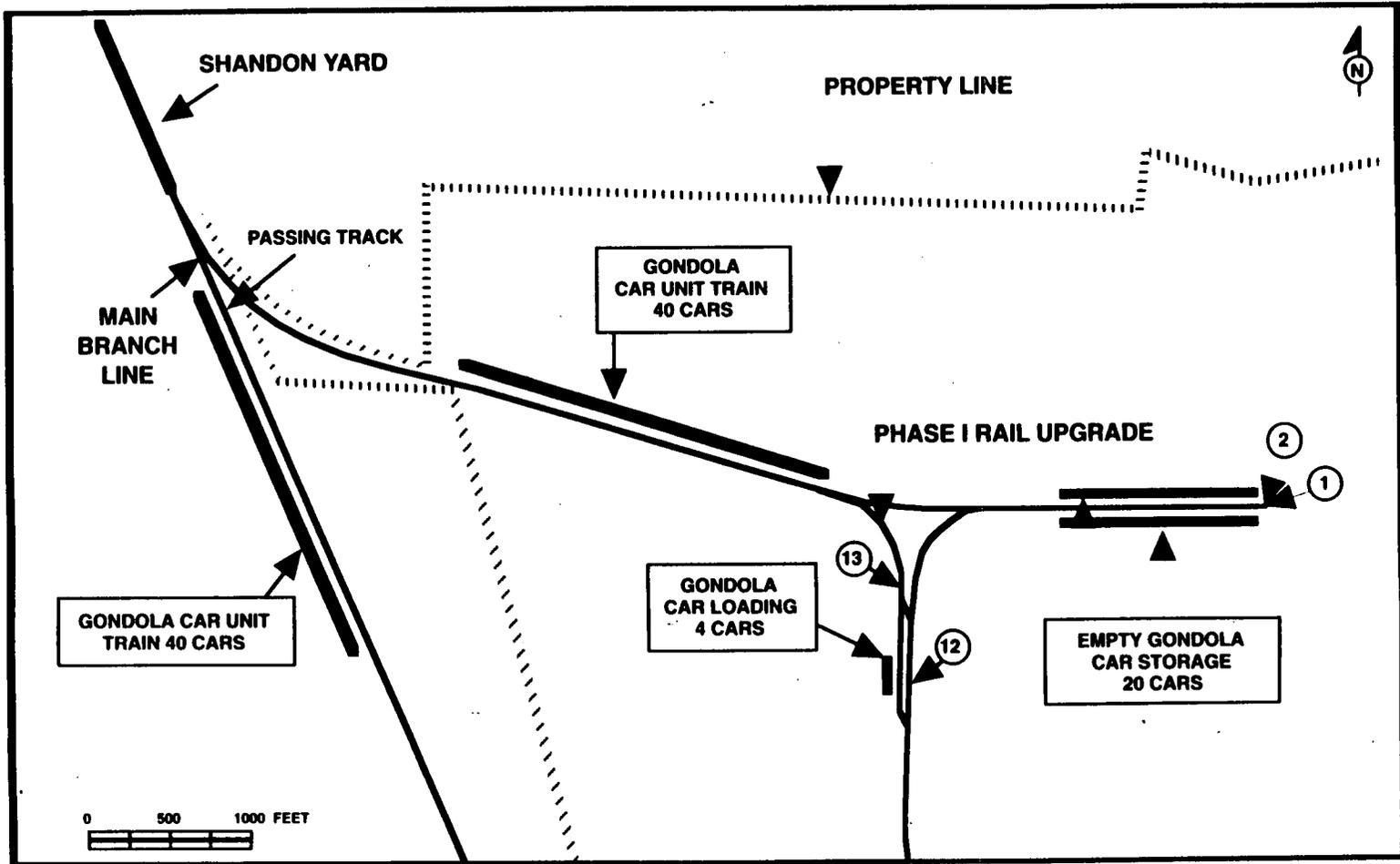
- **Near-FEMP**

- **Shandon Yard Will Not be Used for Storage of Full or Empty Rail Cars**
- **Active Branch Line Tracks Will Be Used for Switching Operations**



# OPERABLE UNIT 1 ON-SITE LOGISTICS

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Graphic 3518A.9 6/95

Operable Unit 1



# FEMP/COTTAGE GROVE BRANCH LINE UPGRADES

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- **Trestles**
  - **Procurement** (1995)
  - **Design** (1996)
  - **Construction** (1996-1998)
  
- **Bypass of Shandon Yard** (1997)
  
- **Final Federal Railroad Administration Inspection** (1998)



## OPERABLE UNIT 4 - SILOS

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### INCLUDES:

- Silos 1 and 2 (K-65 Silos)
- Silo 3 - Metal Oxides
- Silo 4 - Empty
- Decant Sump System
- Soils and any Buried Concrete
- Berm Surrounding Silos 1 and 2
- Perched Water (Encountered During Remediation)

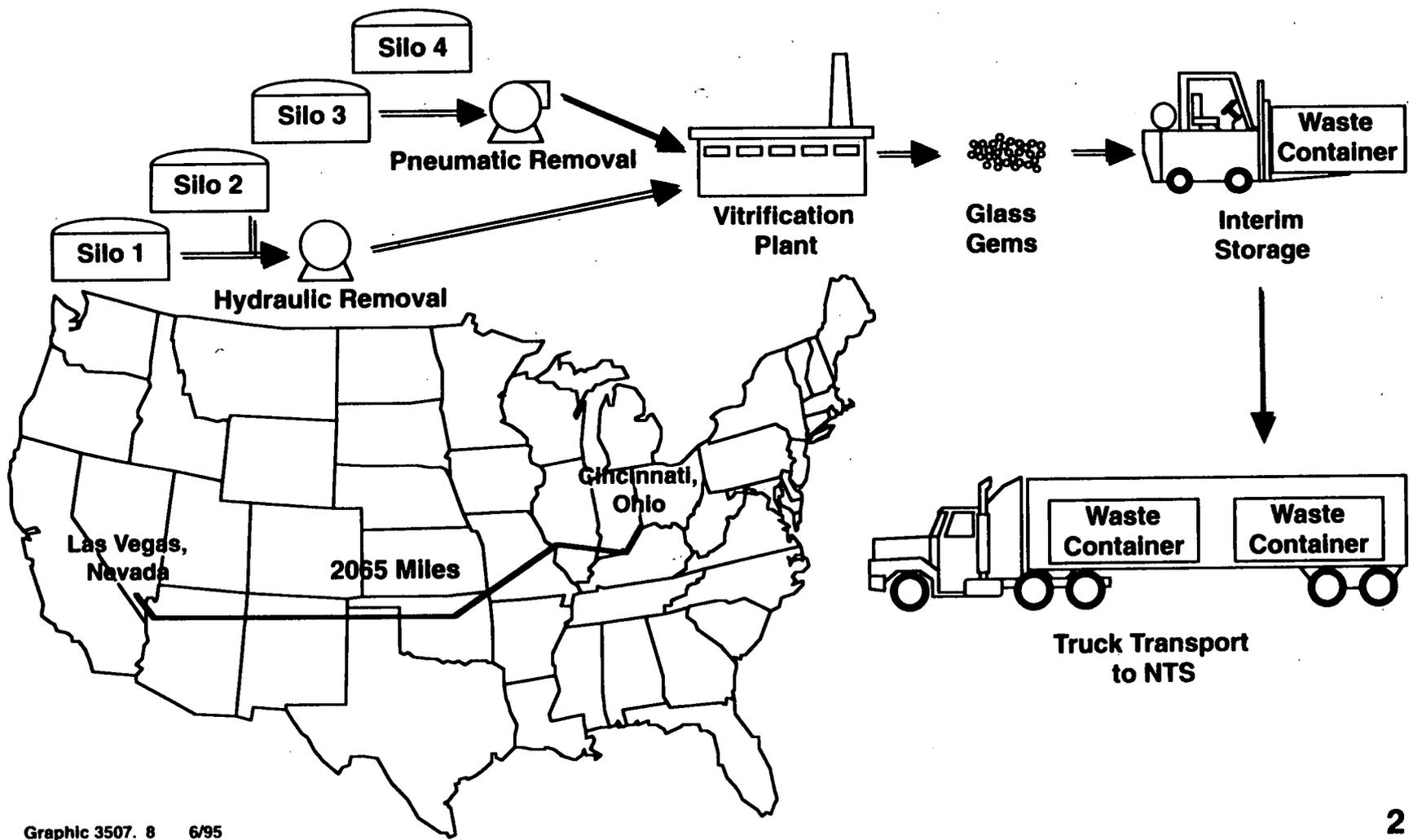
### OBJECTIVE:

**Treat, Stabilize, and Ship the Silo Contents, Demolish and Decontaminate Structures and Affected Areas to Prevent Further Release or Migration of Contaminants to the Environment.**



# OPERABLE UNIT 4 REMEDIAL PROCESS

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# CONTAMINANTS

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- **14,500 Tons Ore Residues**
- **Radium**
- **Lead**
- **Bismuth**
- **Thorium**



# OPERABLE UNIT 4

FERNALD

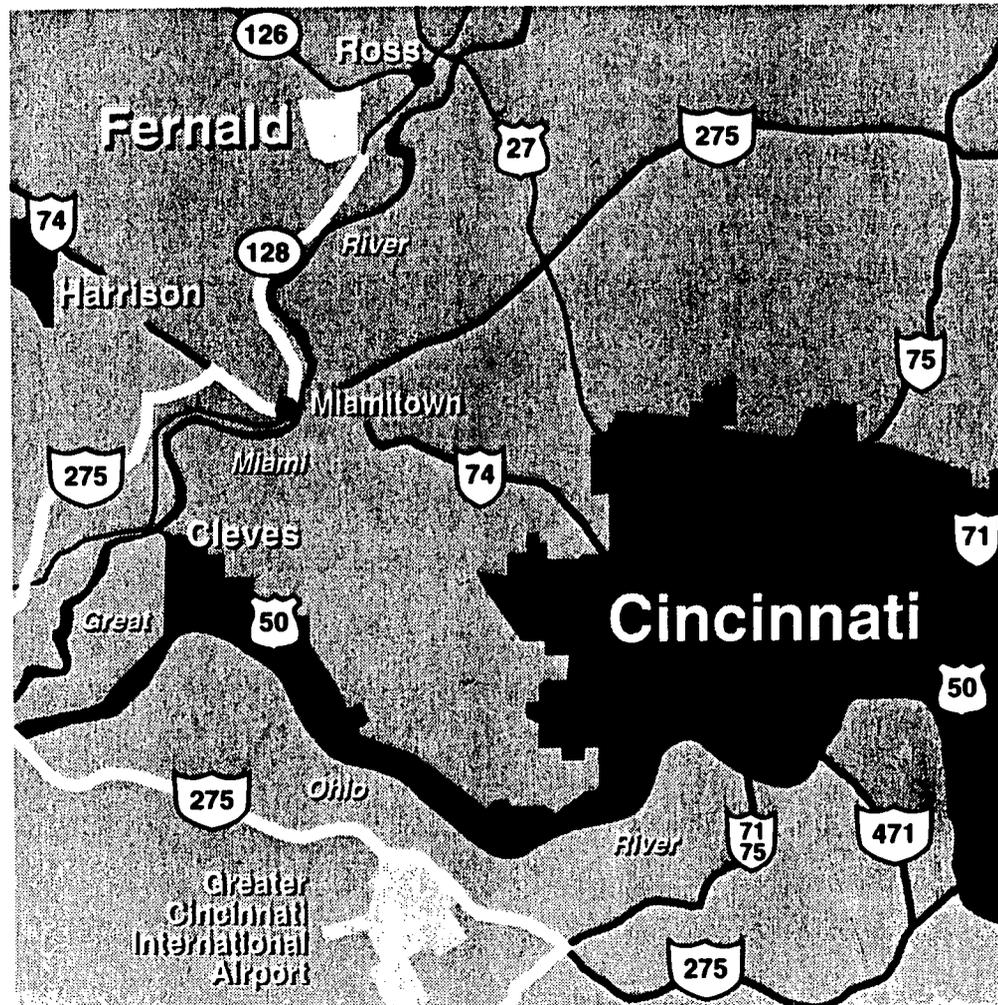
## Operable Unit 4 Key Dates

- **Record of Decision for Remedial Actions - approved by USEPA December 1994**
- **Pilot Plant Shipment - July 1996**
- **Initiate Vitrification Operations - December 1998**
- **Complete Vitrification Operations - December 2001**
- **Complete Final Site Remediation - February 2003**



# OHIO TRUCK ROUTE

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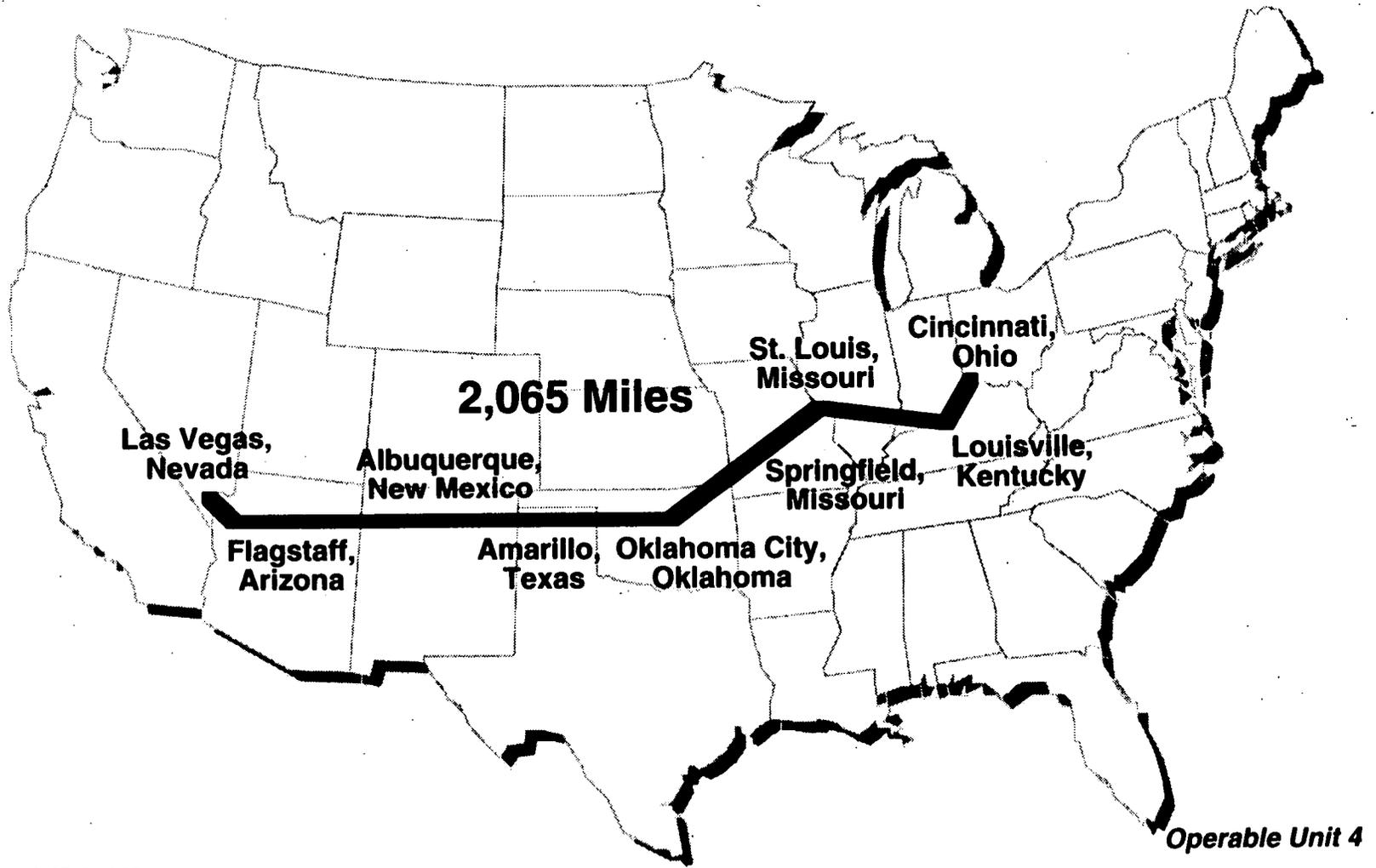


Ohio Truck Route



# TRUCK ROUTE FROM FEMP TO NEVADA TEST SITE

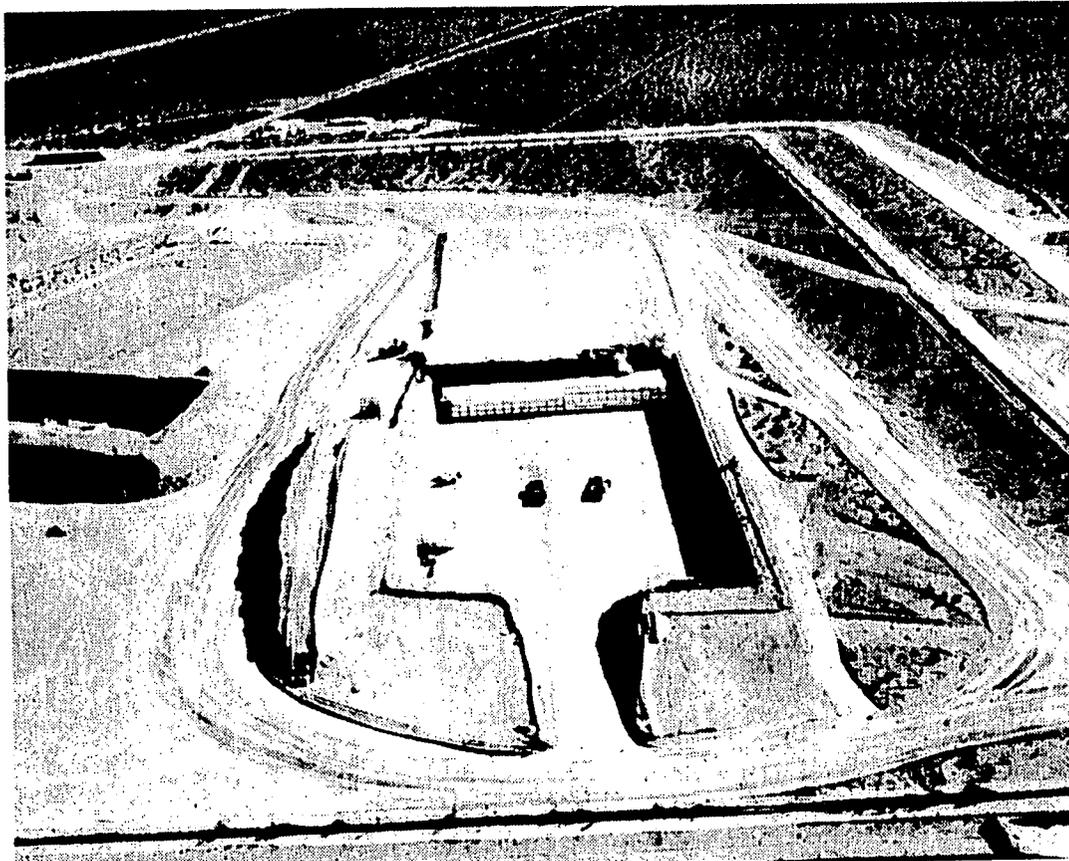
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# NEVADA TEST SITE AREA - 5 CONTAINERIZED LOW-LEVEL WASTE

FERNALD



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*Operable Unit 4*

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# NEVADA TEST SITE AREA - 5

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*Operable Unit 4*

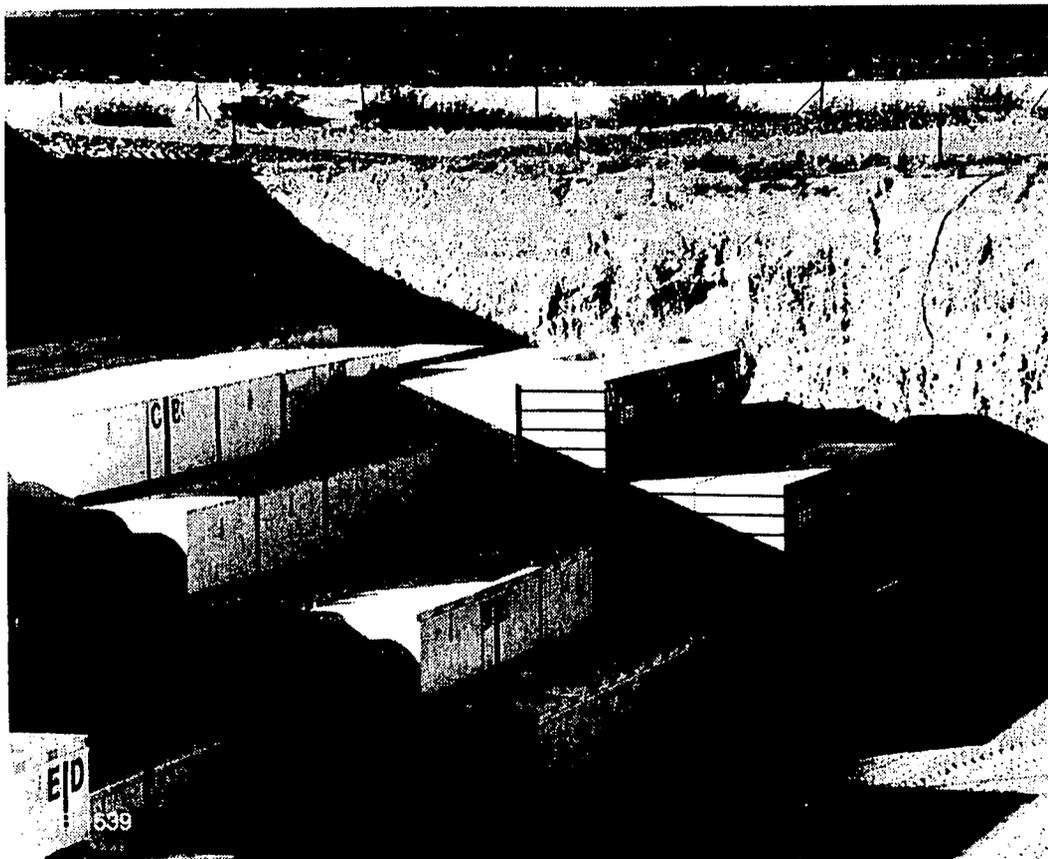
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# NEVADA TEST SITE AREA - 5

FERNALD



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*Operable Unit 4*

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# SUMMARY

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## OU 1:

- Material** - Dried and Packaged Waste from Pits
- Method** - Direct Rail Transportation to PCDF
- Start** - 1998 Forecast
- Period** - Estimated 10 years

## OU 4:

- Material** - Vitrified and Packaged Waste from Silos
- Method** - Direct Truck Transportation to NTS
- Start** - 1998 Forecast
- Period** - Estimated 3 years

\* Schedule dependent on funding



# **PUBLIC PARTICIPATION OVERVIEW**

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- **Required Public Involvement Activities During OU Remedial Design Process**
- **Public Notification of Availability of Key Remedial Design Documents**
- **Supplemental Public Involvement Activities During OU Remedial Design**
- **All RD Documents Submitted To U.S. EPA Will Be Available At The Public Environmental Information Center (PEIC) Located At 10845 Hamilton-Cleves Highway -- (513) 738-0165**



# **PUBLIC PARTICIPATION OVERVIEW**

FERNALD

**For Additional Information About Public  
Involvement Opportunities During The  
Remedial Design Process, Please Call:**

**Gary Stegner  
Public Information Officer  
Fernald Area Office  
(513) 648-3153**