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U-006-1005.4

**OVERHEADS PRESENTED AT THE MAY 11, CAB MEETING IN
NEVADA - (CITIZEN'S ADVISORY BOARD)**

05/11/94

**DOE-FN CAB
48
OVERHEADS**

A-R

The Importance of the Nevada Test Site

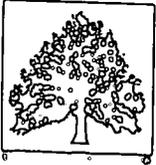
to the Fernald Environmental
Management Project

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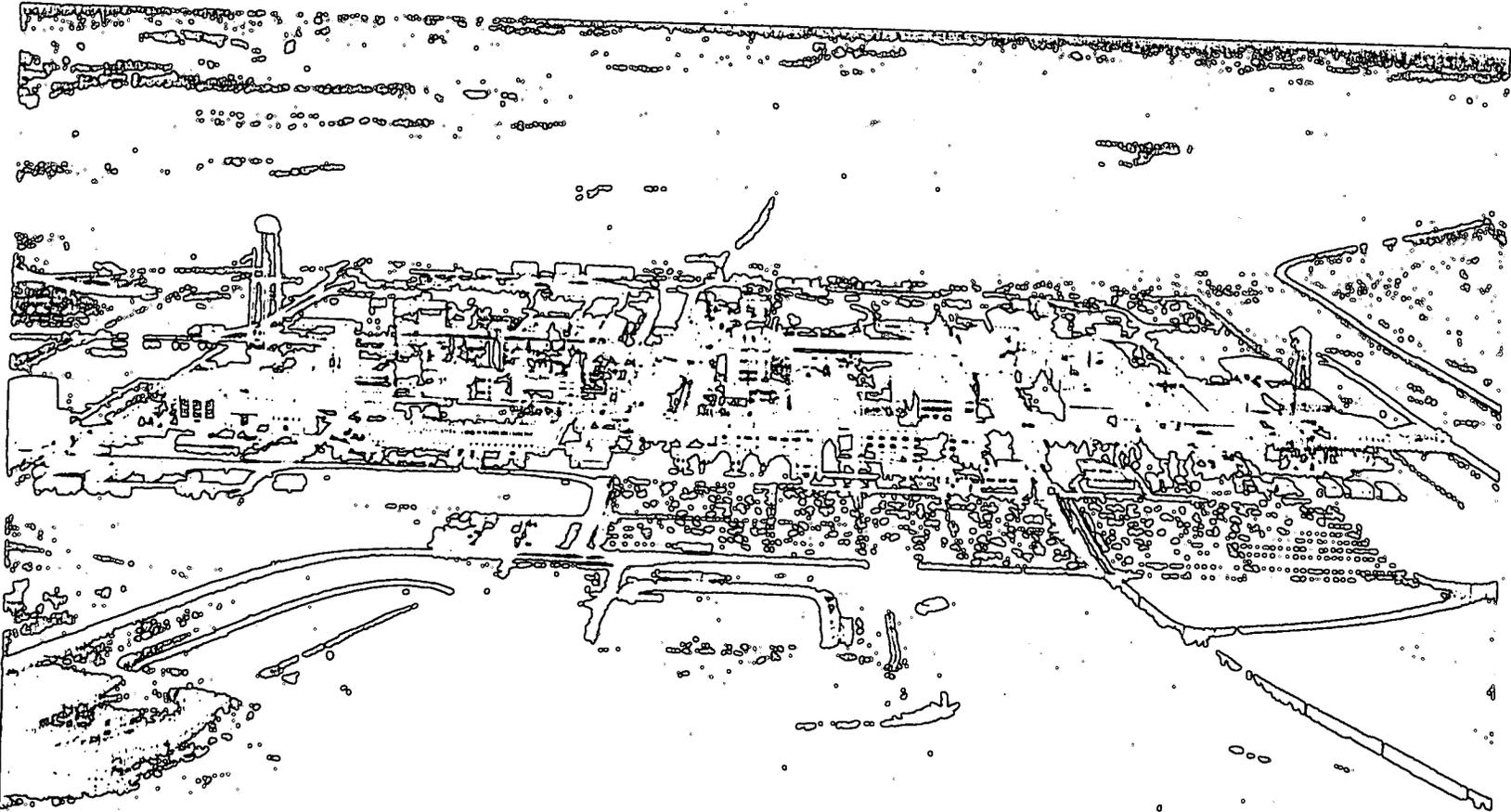


DOE Fernald Field Office
May 1994

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FERNALD SITE AERIALS



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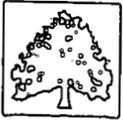
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DOE's Fernald Site - Description

- 136 acre production facility within a
- 1,050 acre federal site in an agricultural area
- 17 miles northwest of Cincinnati, Ohio
- Site lies atop the sole-source Great Miami Aquifer

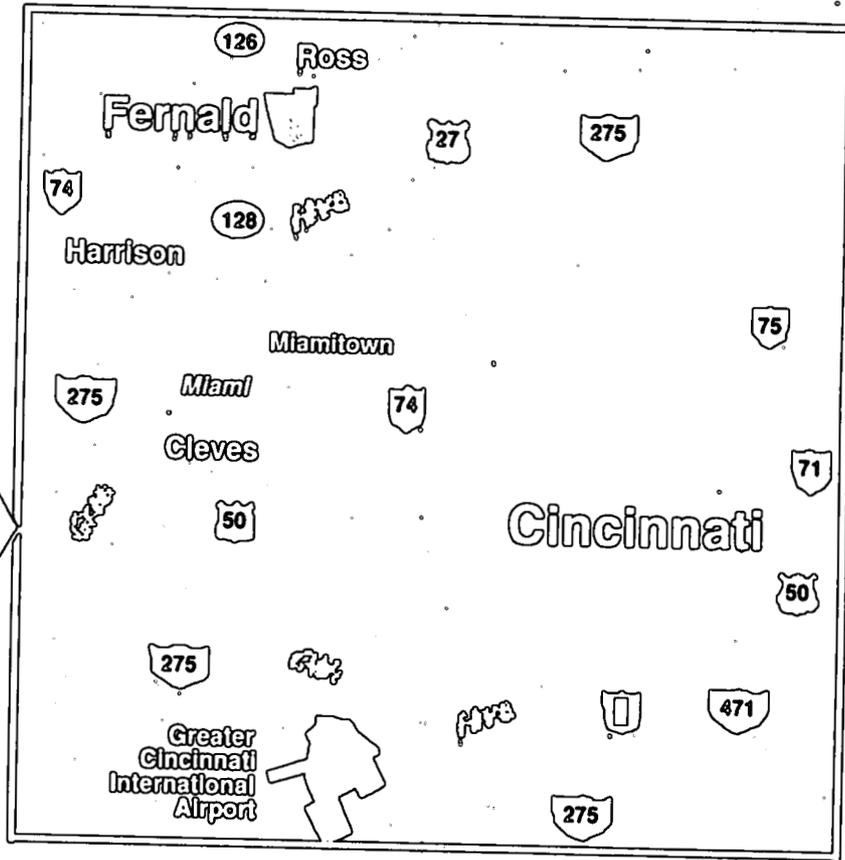
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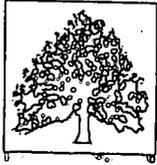
FERNALD AND VICINITY

Fernald site covers about 1,050 acres.

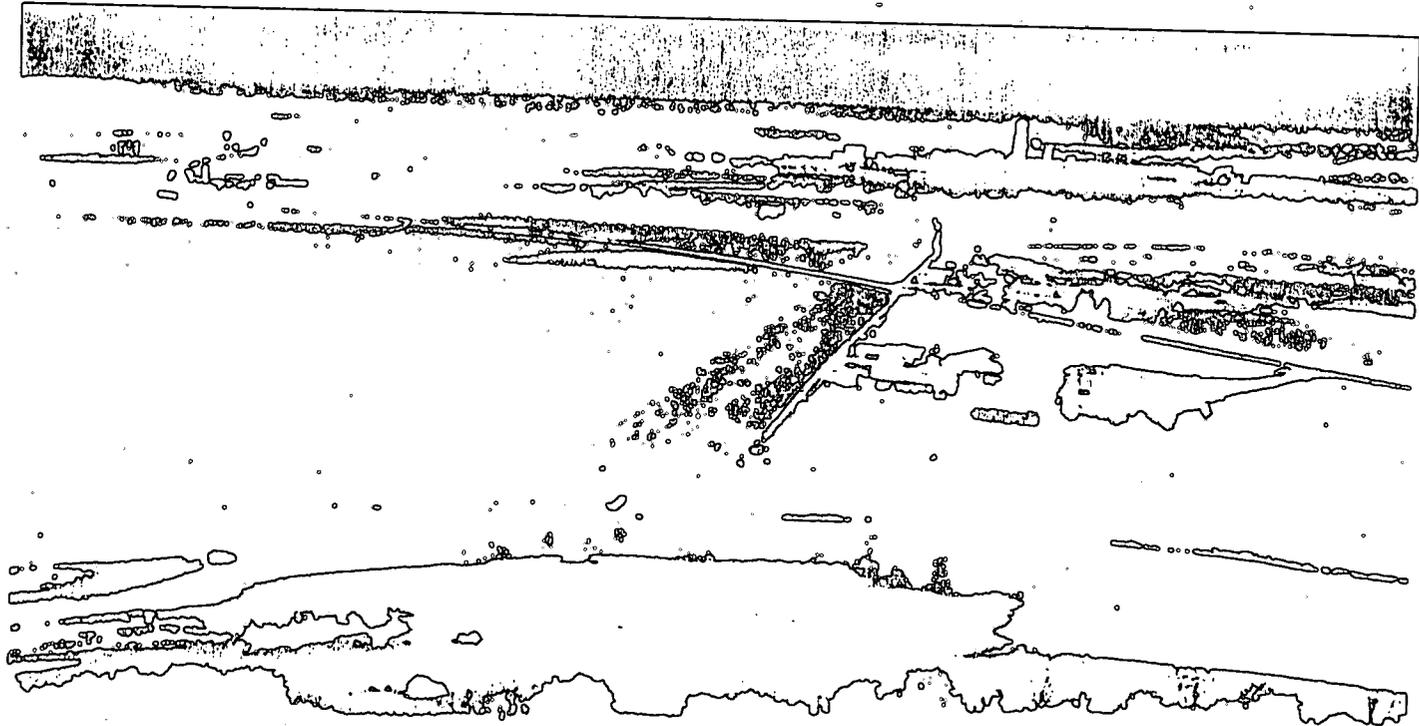


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FERNALD SITE AERIALS



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Environmental Sciences, Inc.

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DOE's Fernald Site - History

1952-1989: Production of uranium products for national defense

1989: Production ends and mission shifts to remediation

Fernald site placed on EPA's National Priorities List

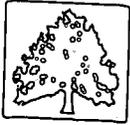
1990: Programmatic responsibility for Fernald transferred from Defense Programs to Environmental Management

1991: Amended Consent Agreement signed: DOE and USEPA Region V

1992: DOE awards first Environmental Restoration Management Contract to FERMCO

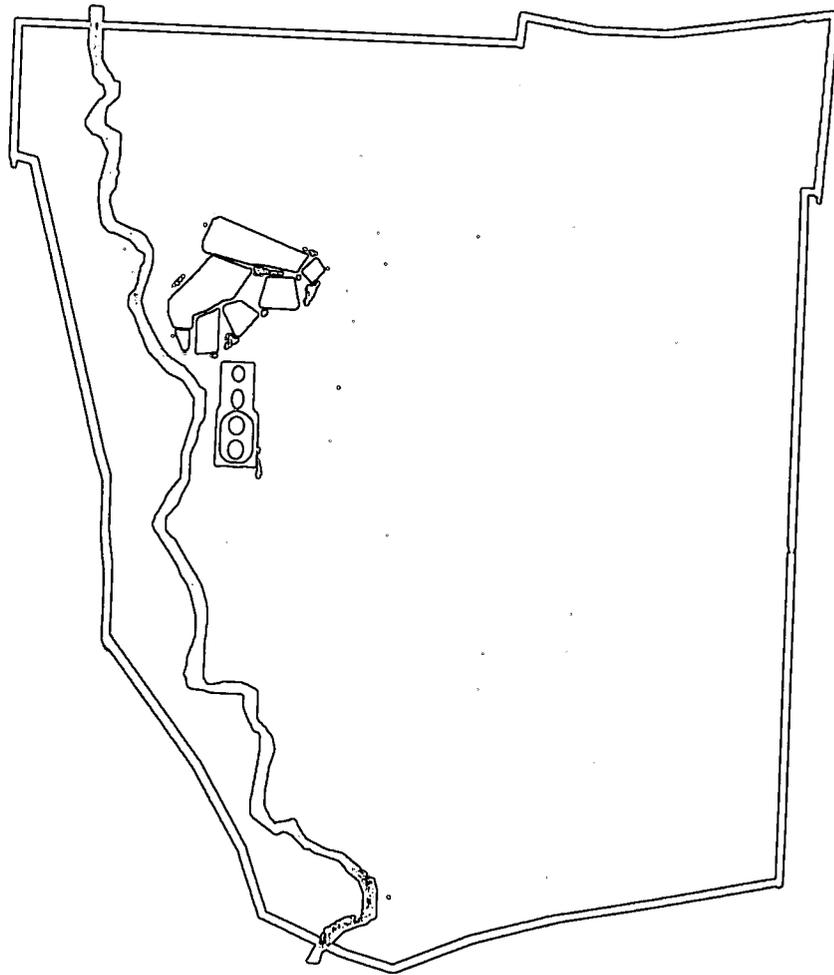
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OPERABLE UNITS

-  Operable Unit 1
-  Operable Unit 2
-  Operable Unit 3
-  Operable Unit 4
- Operable Unit 5
(Not Shown)



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FEMP Operable Units

- Operable Unit 1: Waste Pits 1-6, Clearwell and Burn pit
- Operable Unit 2: Fly Ash Piles, Lime Sludge Ponds, Solid Waste Landfill, South Field Disposal Area
- Operable Unit 3: Production Area and Related Facilities and Equipment
- Operable Unit 4: Silos 1, 2, 3 and 4
- Operable Unit 5: Contaminated Groundwater (On and Off Site), Surface Water, Soils

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Fernald Radioactive Waste Volume Estimates

Remediation Wastes - Slide 1 of 2
(Volumes are in-place estimates)

<u>Waste</u>	<u>Est. Volumes (cu. yds.)</u>	
	<u>On-site Disp.</u>	<u>Off-site Disp.</u>
Waste pits, caps & liners (OU1)		628,200
Landfill, lime sludge ponds, fly ash piles (OU2)	167,350	
More contaminated portions of above		12,750
Building demolition material (OUs 3, 4):		
Concrete, transite, asphalt	119,632	
Steel	(recycle)	
Equipment & misc.	54,900	54,900*

*planned for NTS disposal

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Fernald Radioactive Waste Volume Estimates

Remediation Wastes - Slide 2 of 2
(Volumes are in-place estimates)

Est. Volumes (cu. yds.)

<u>Waste</u>	<u>On-site Disp.</u>	<u>Off-site Disp.</u>
Silo residues (OU4)		13,900* (6,000 net)
Water treatment filtrate (OU5)		2,000/yr.*
Soil washing (all OUs):		
Clean soil	1,061,800	
Residues		265,800

*planned for NTS disposal

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Fernald Radioactive Waste Volume Estimates

Legacy Wastes - for Disposition Off Site

<u>Waste</u>	<u>Est. Volumes (cu. yds.)</u>
Low-level wastes	17,500*
Mixed (RCRA) low-level wastes	3,600
Low-level thorium residues	4,200*
Product materials (some portion will be sold/recycled)	3,100*

*planned for NTS disposal

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Some materials must leave the Fernald Site

Silo Residues and Low-Level Thorium Residues are of most concern

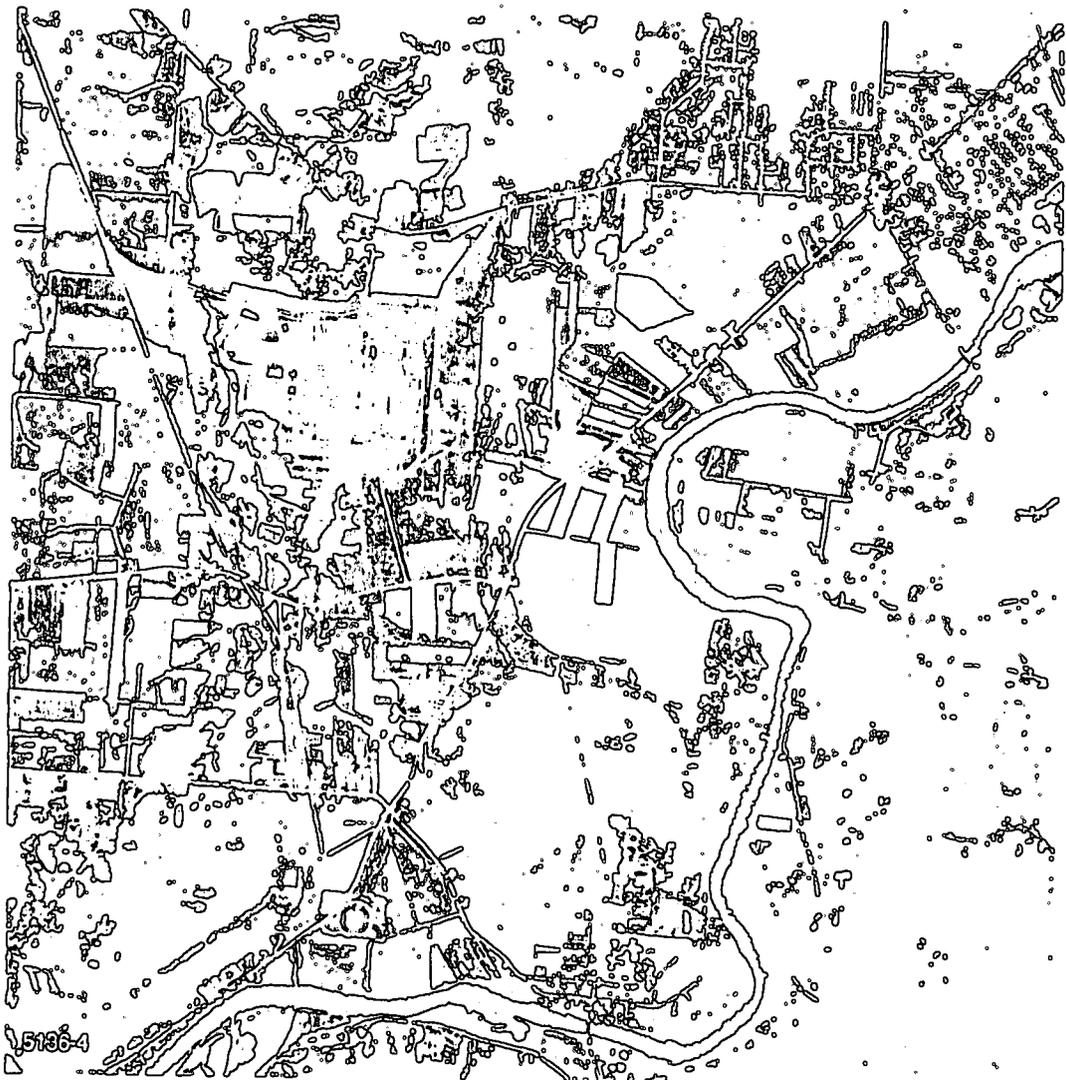
Sole-source aquifer

- near the surface
- FEMP has contaminated

Nearby population and agriculture



FERNALD SITE AERIALS

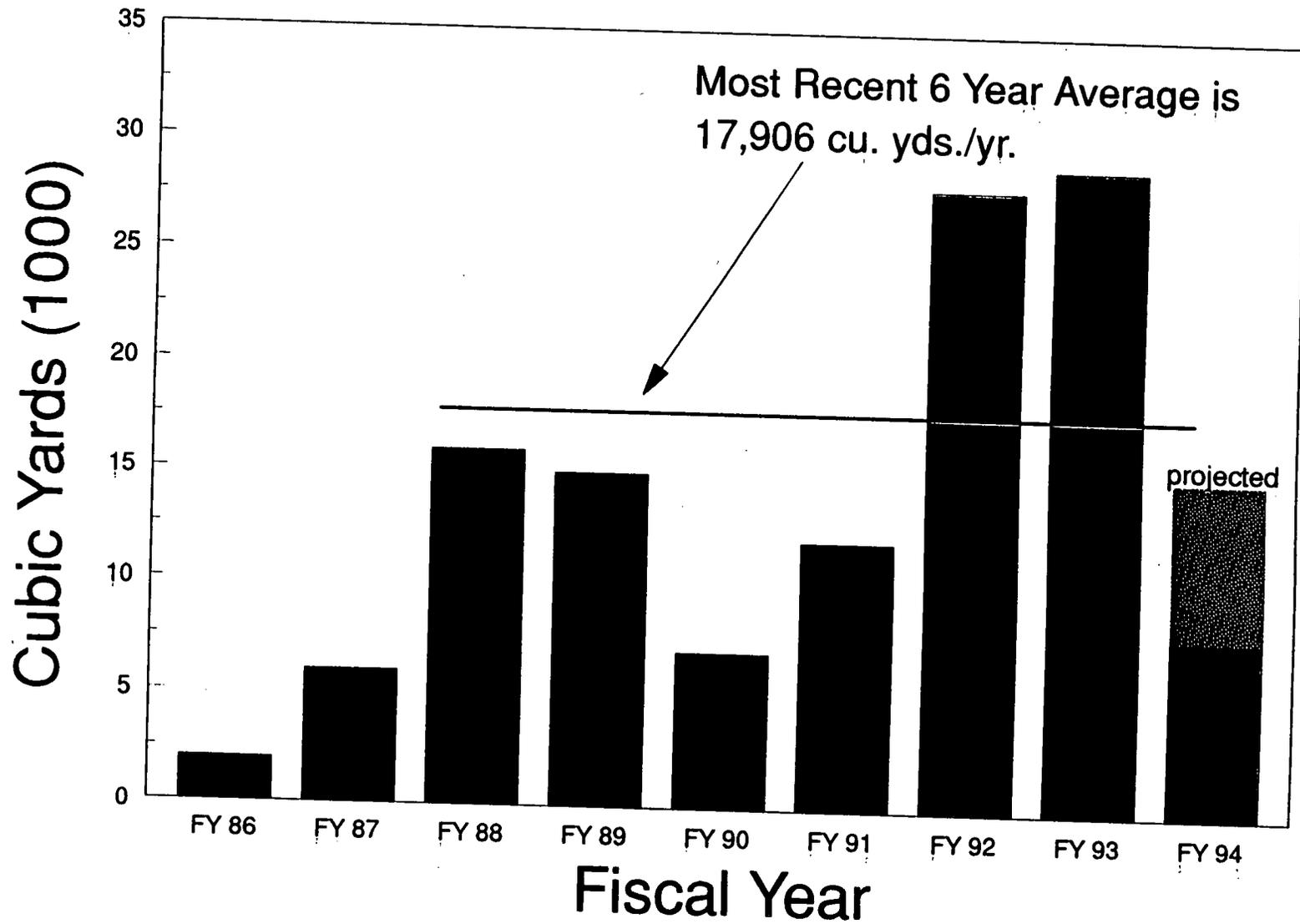


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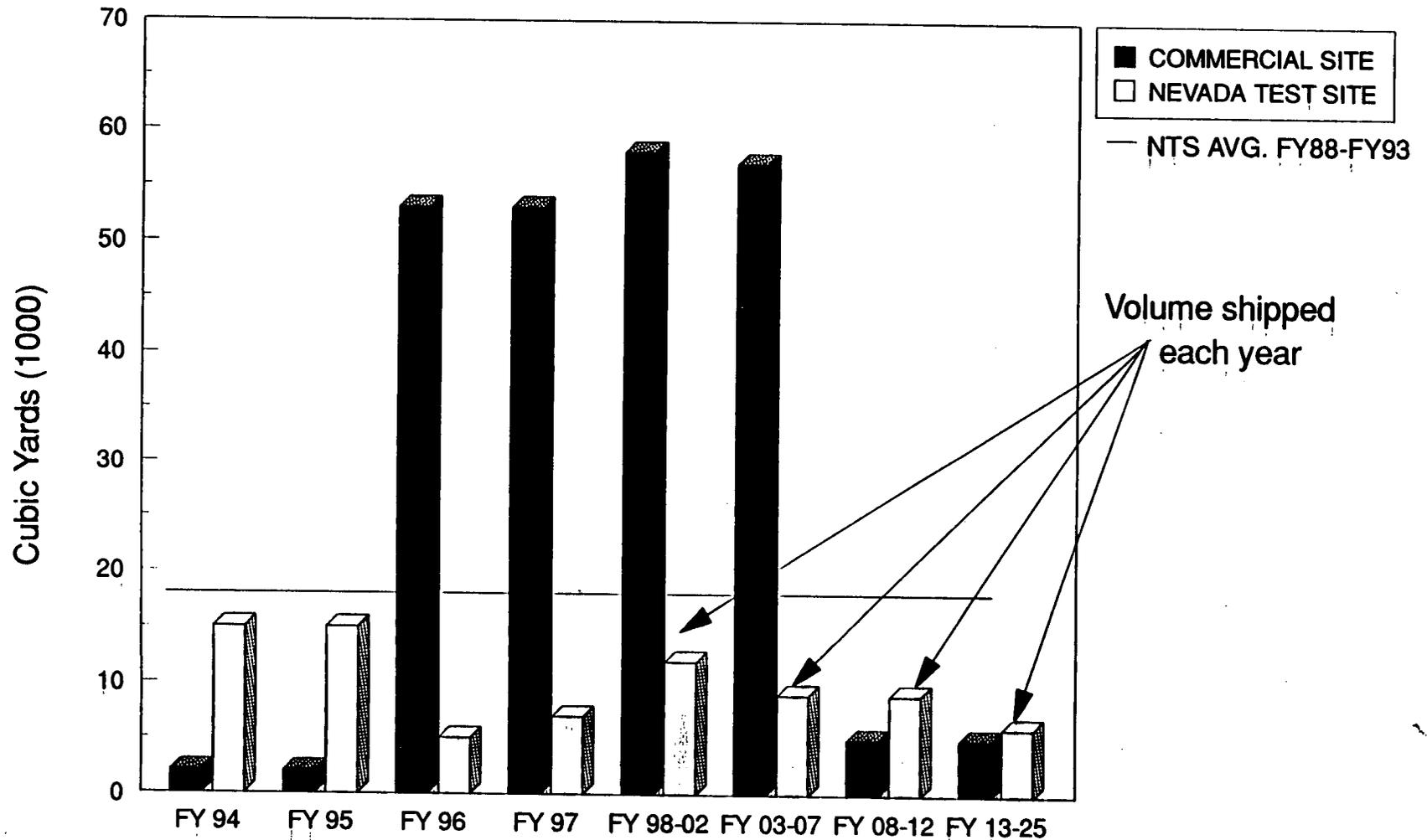
FEMP LLW Shipments to NTS



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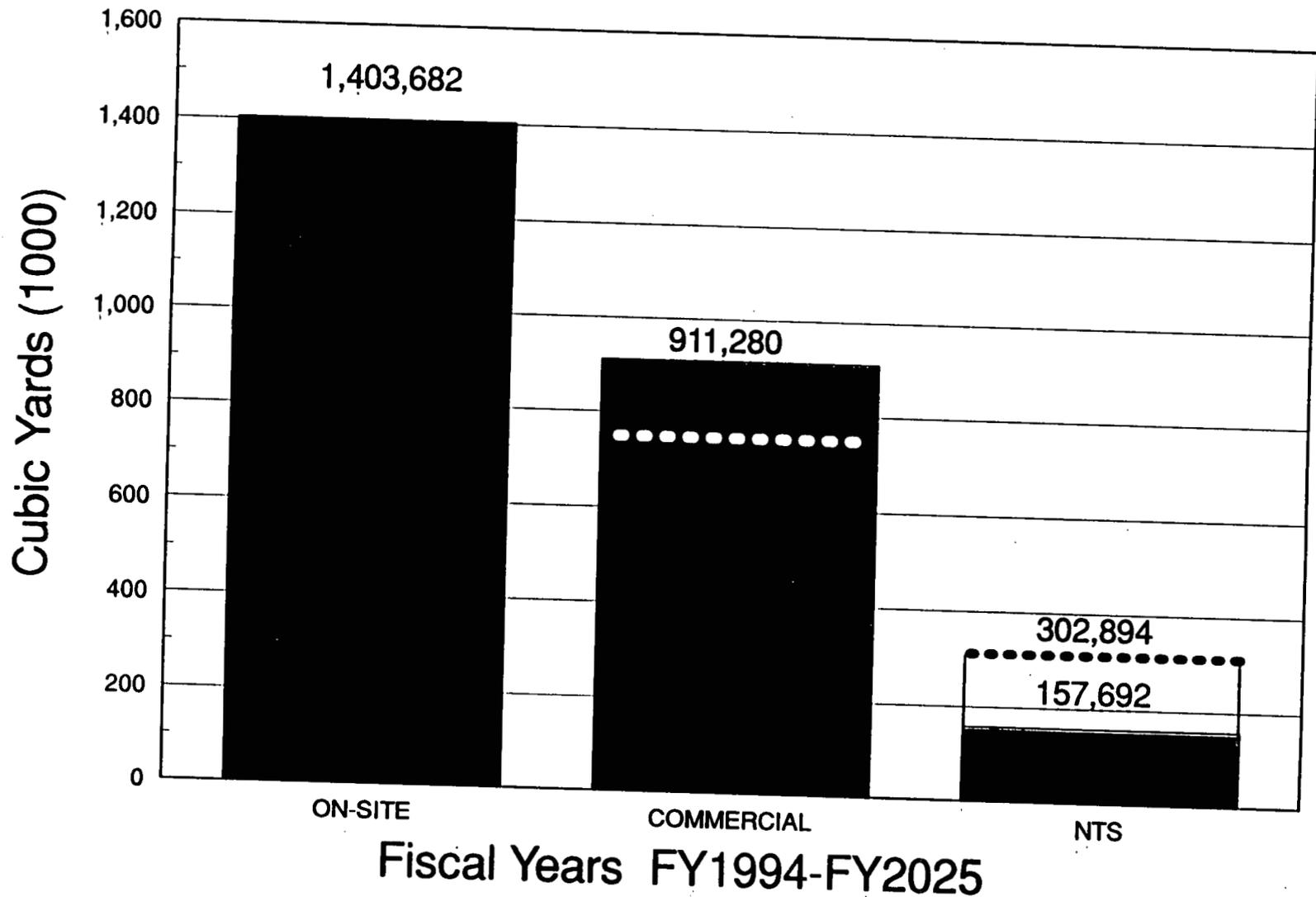
FEMP Projected Waste Shipments



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Projected Disposition of FEMP Wastes



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FEMP Commitment to Minimize Waste to NTS

Minimize waste generated

Recycle material

Free-release material

Volume-reduce remaining material

Leave waste on-site if possible

Use commercial disposal facilities where possible

Bury waste at NTS only when necessary

**The State of Ohio recognizes its own responsibilities
in the final disposition of Fernald wastes -**

"Large volumes of contaminated construction and demolition debris, soil, fly ash and bottom ash and possibly some solid waste will have to be disposed onsite at Fernald."

- Ohio EPA, in a letter to USEPA dated April 5, 1994

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We are doing everything we can ...

- Waste minimization and pollution prevention programs
- Recycle program -
2200 tons scrap metal
1300 tons scrap copper
- Free-release program -
200 tons pilot project
- Volume reduction -
vitrification
soil washing
- On-site disposition -
OEPA support
- Commercial disposal -
change in DOE policy
Envirocare

... and we need your help.

The CERCLA schedule for Fernald Site clean-up provides opportunities for comment and input from -

DOE-Nevada

NTS stakeholders

the Public

- on waste management plans for each Operable Unit at the FEMP.

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Summary

- NTS is part of a balanced waste management effort for FEMP
- FEMP is committed to minimizing waste going to NTS for burial
- FEMP must rely on NTS for burial of certain materials

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Commitment to Open Communication

- Fernald Site representatives and regulators stand ready to assist DOE-NV in communicating with its stakeholders and regulators.
- We value your comments on our remediation and waste management plans.

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The Importance of the Nevada Test Site

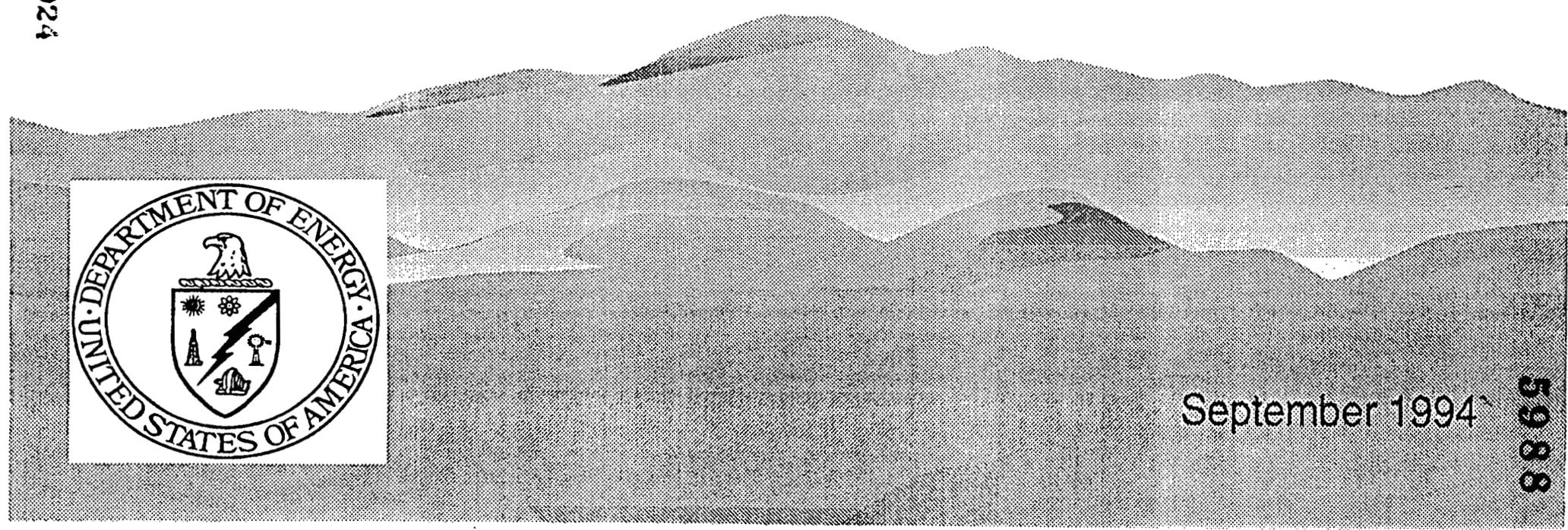
to the Fernald Environmental Management Project

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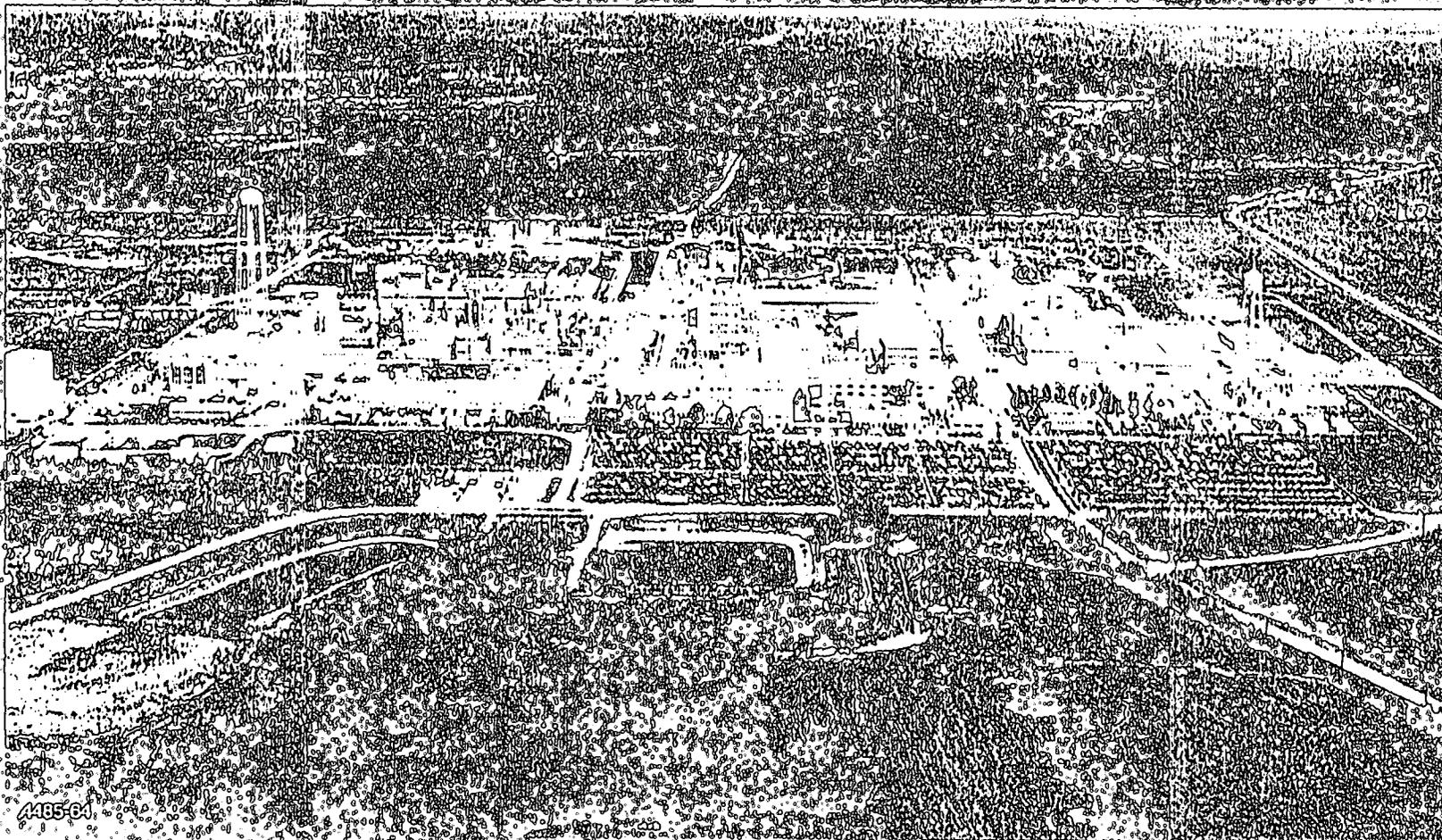
September 1994

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FERNALD SITE AERIALS



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Graphics 2711.1 A93

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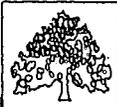
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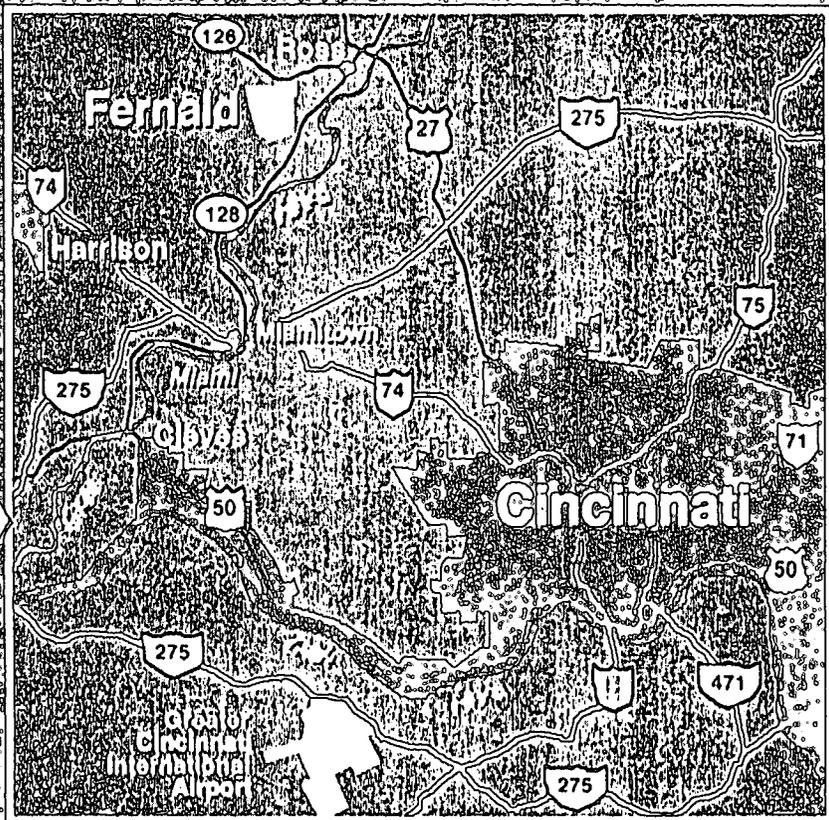
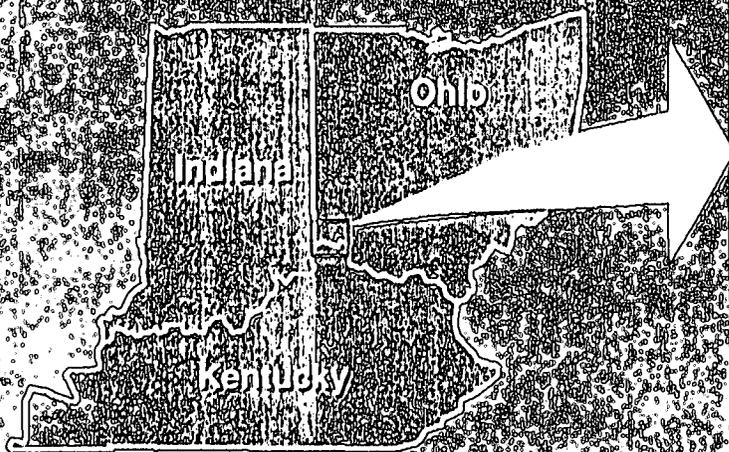
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FERNALD AND VICINITY

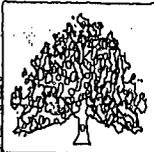
Fernald site covers about 1,050 acres.



Graphic 1/2000.2 8/04

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FERNALD SITE AERIALS



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Graphics 2711.3 4/83

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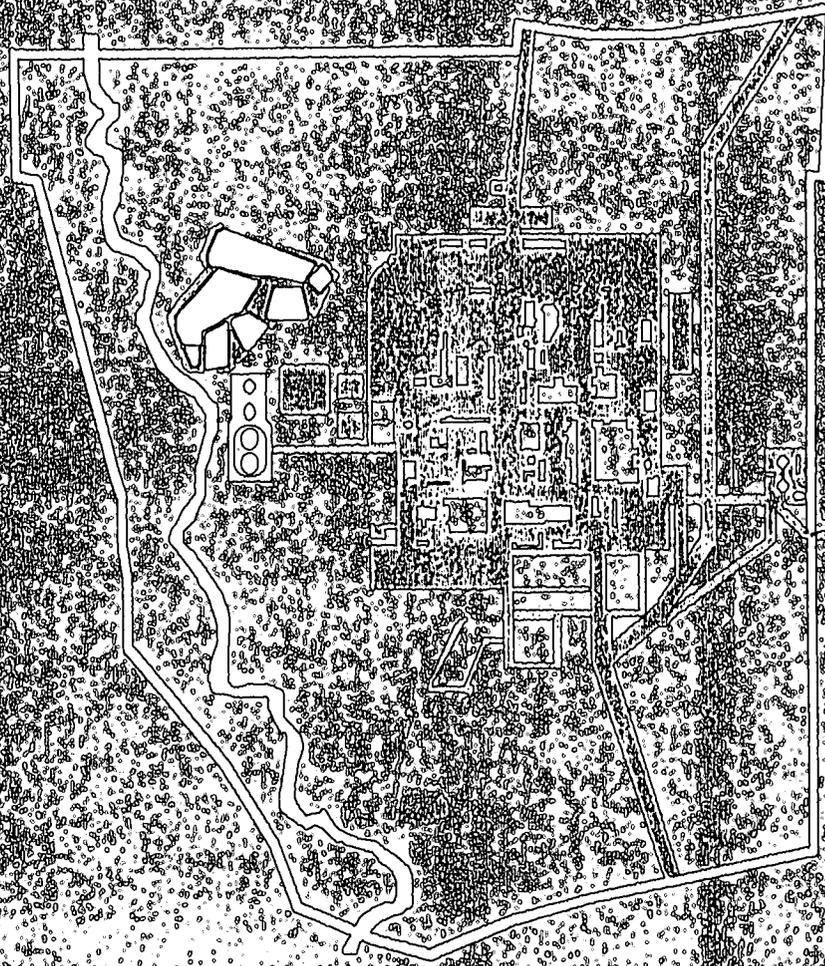
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(Not Shown)



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FEMP Operable Units

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Fernald Radioactive Waste Volume Estimates

Remediation Wastes - Slide 1 of 2

(Volumes are in-place estimates)

Est. Volumes (cu. yds.)

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Steel & other metal	(recycle)	
Equipment & misc.	54,900	54,900*

*planned for NTS disposal

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Some materials must leave the Fernald Site

Silo Residues and Low-Level Thorium Residues
are of most concern

Sole-source aquifer

- near the surface
- FEMP has contaminated

Nearby population and agriculture

Fernald Radioactive Waste Volume Estimates

Legacy Wastes - for Disposition Off Site

<u>Waste</u>	<u>Est. Volumes (cu. yds.)</u>
Low-level wastes	12,700*
Mixed (RCRA) low-level wastes	3,600
Thorium residues	4,200*
Product materials (the portion not sold/recycled)	11,400*

*planned for NTS disposal

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Fernald Radioactive Waste Volume Estimates

Remediation Wastes - Slide 2 of 2
(Volumes are in-place estimates)

Est. Volumes (cu. yds.)

<u>Waste</u>	<u>On-site Disp.</u>	<u>Off-site Disp.</u>
Silo residues, vitrified (OU4)		13,990 (6,600 net)*
Water treatment residues (OU5)		64,000
Contaminated soils (all OUs):	1,500,000 (minimum)	

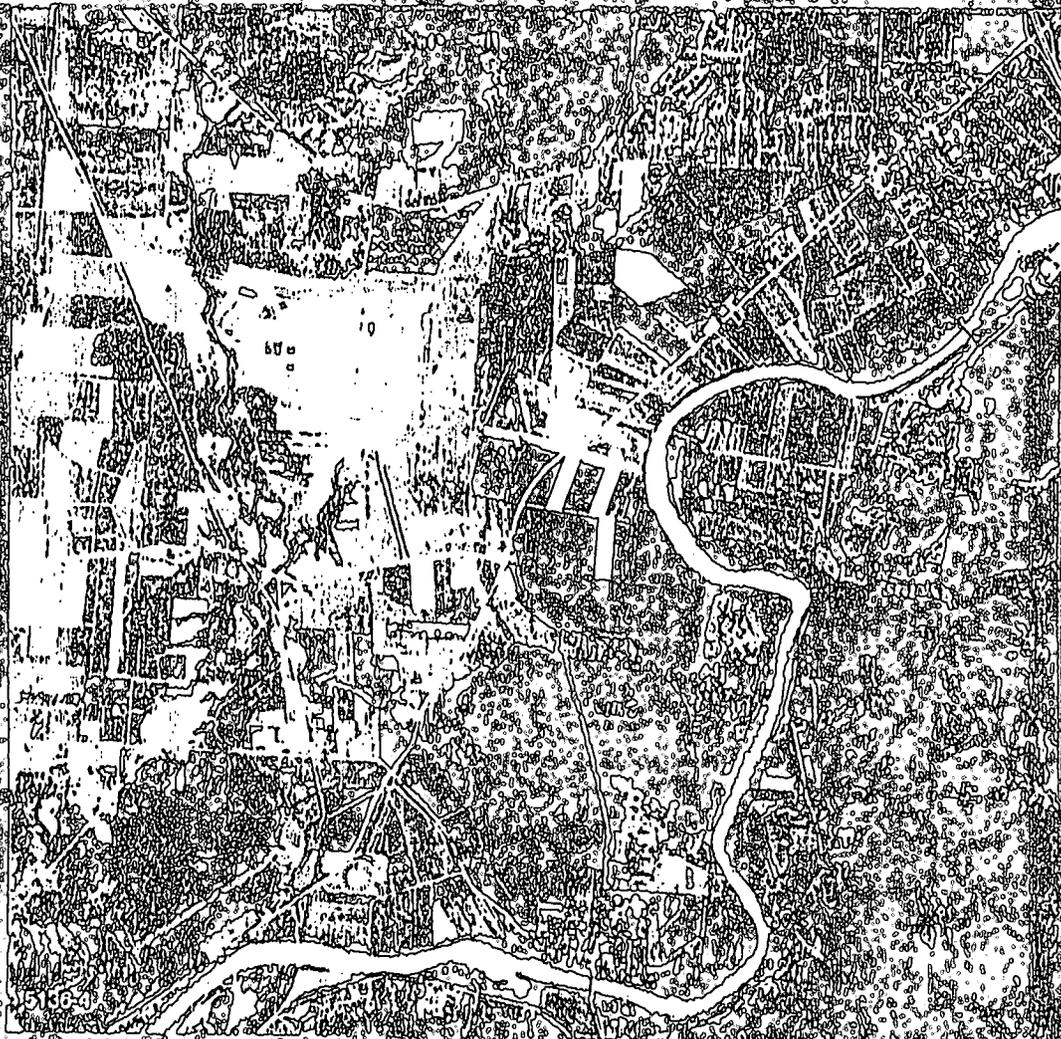
*planned for NTS disposal

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FERNALD SITE AERIALS



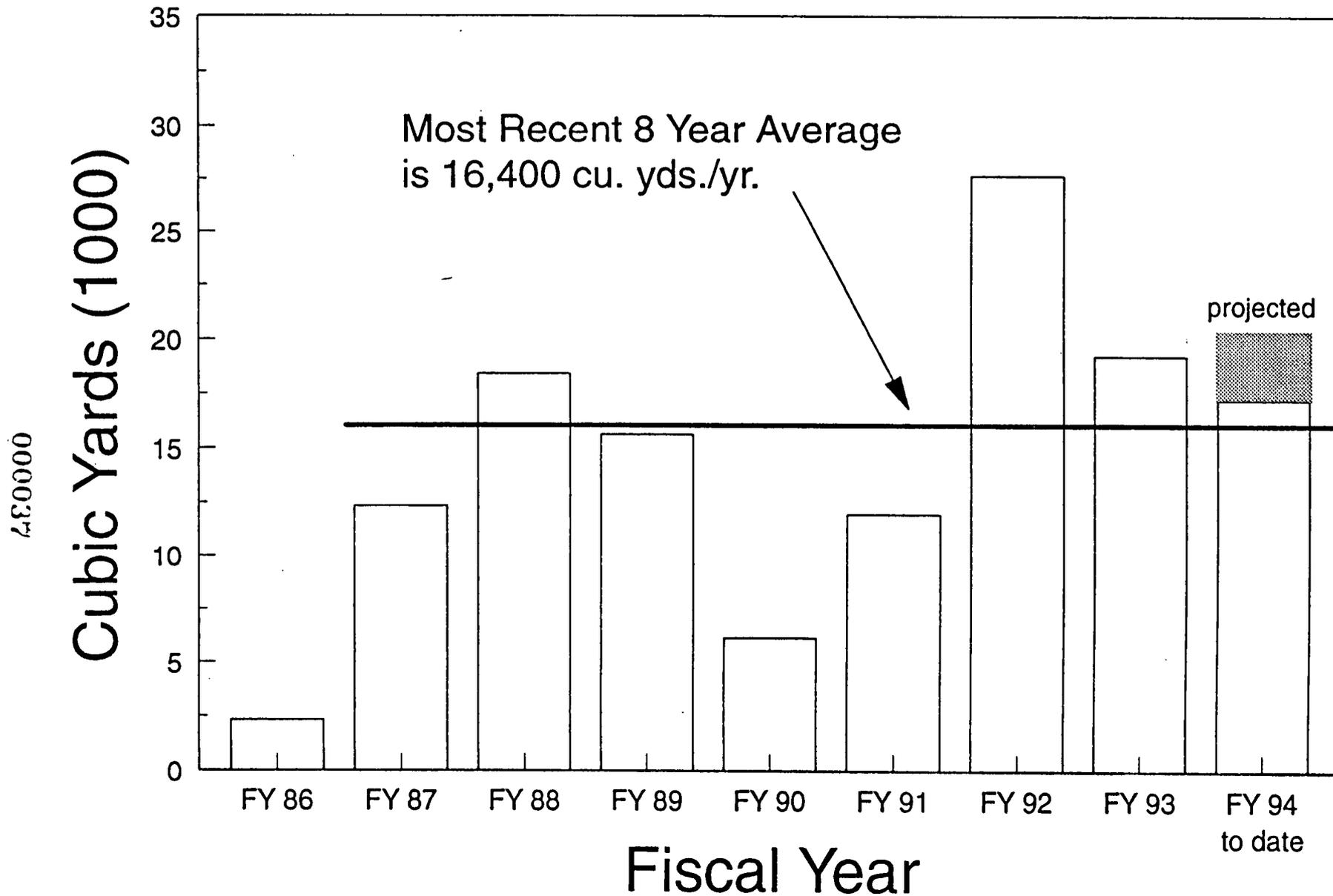
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FEMP LLW Shipments to NTS

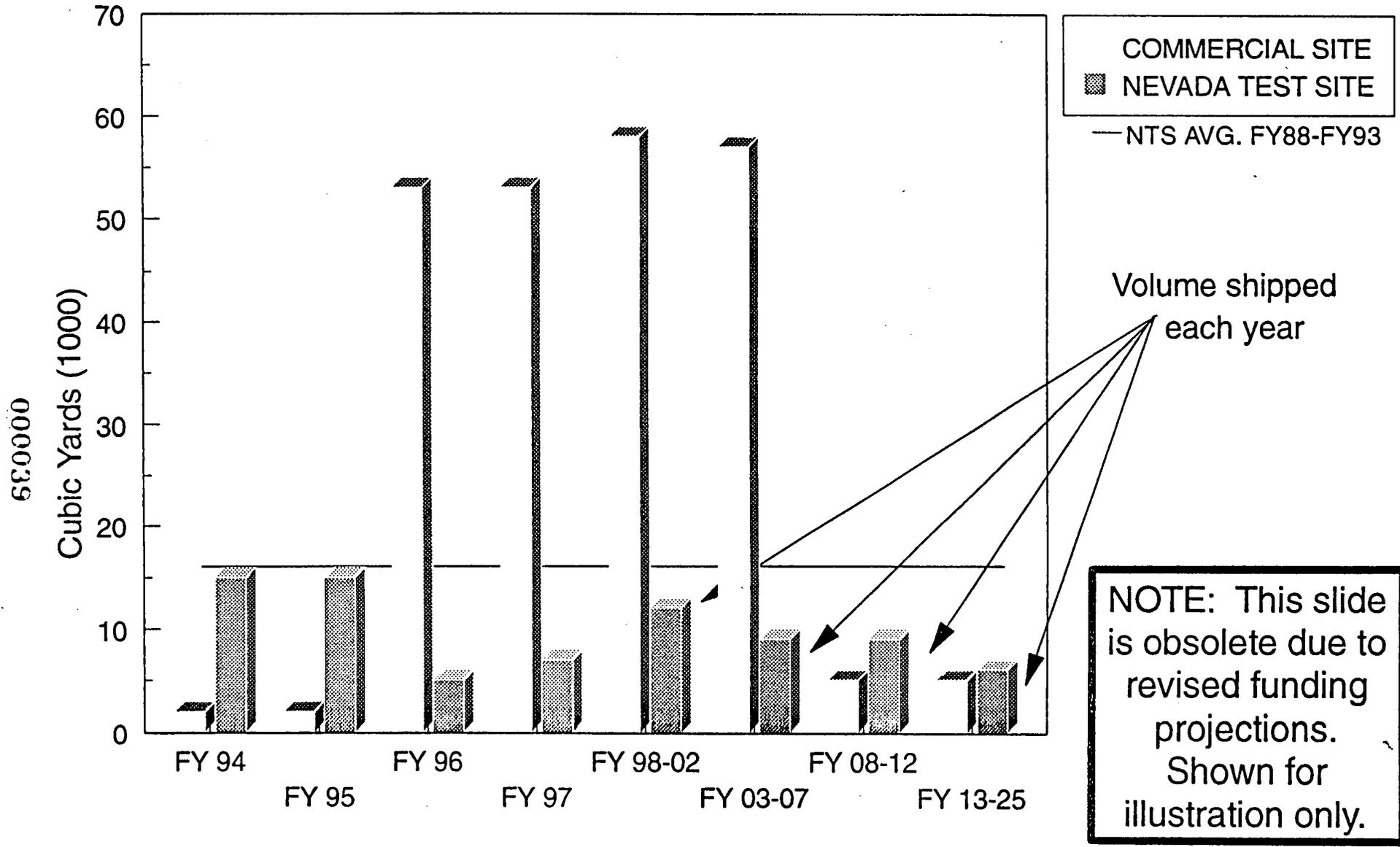


Future FEMP LLW shipments to NTS are projected never to exceed annual volumes shipped 1987-1994.

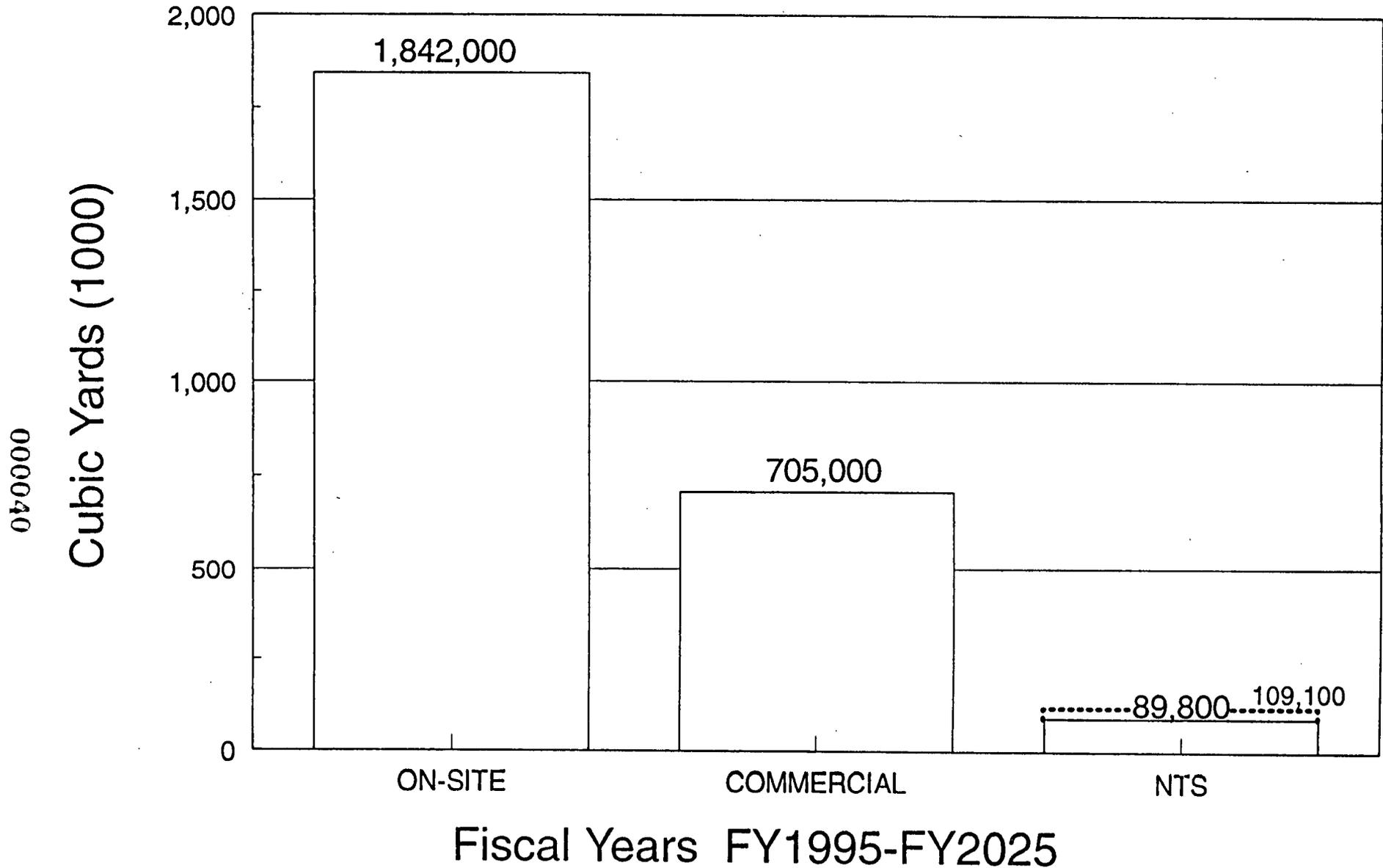
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FEMP Projected Radioactive Waste Shipments



Projected Disposition of FEMP Radioactive Wastes



- Future Fernald LLW shipments to NTS will amount to only 2/3 of the amount it has already shipped (89,800 cu yds versus 134,100 cu yds through FY94).
- This 89,800 cu yds translates to 4,700 truckloads, or an average of 3 trucks per week for 30 years.

FEMP Commitment to Minimize Waste to NTS

Minimize waste generated

Recycle material

Free-release material

Volume-reduce remaining material

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Use commercial disposal facilities where possible

Bury waste at NTS only when necessary

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- Volume reduction -
vitrification
supercompaction
- On-site disposition -
OEPA support
- Commercial disposal -
change in DOE policy
Envirocare

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- Ohio EPA, in a letter to USEPA dated April 5, 1994

The CERCLA schedule for Fernald Site clean-up provides opportunities for comment and input from -

DOE-Nevada

State of Nevada

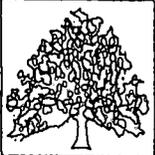
NTS stakeholders

the Public

- on waste management plans for each Operable Unit at the FEMP.

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FEMP PATH FORWARD

1993

1994

1995

1996

1997

1998

OU1

OU2

OU3

OU4

OU5

	1993	1994	1995	1996	1997	1998
OU1	RI 1/93	FS/PP 03/94	ROD 11/94	FW 02/96		
OU2		RI 02/94	FS/PP 04/94	ROD 01/95	FW 04/96	
OU3			IFROD 04/94	FW 01/95	RI 03/96	FS/PP 08/96
OU4	RI 04/93	FS/PP 2/20/93	ROD 07/1/94	FW 09/95		
OU5			RI 06/94	FS/PP 11/94	ROD 07/95	FW 10/96

RI = Remedial Investigation
 FS/PP = Feasibility Study Proposed Plan
 ROD = Record of Decision
 IFROD = Interim Record of Decision
 FW = Field Work

NOTE:
 All dates indicate initial
 submittal to U.S. EPA
 15 months following
 the ROD implementation
 of action
 Status as of 4/26/94

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Summary

- NTS is part of a balanced waste management effort for FEMP
- FEMP is committed to minimizing waste going to NTS for burial
- FEMP must rely on offsite disposal sites, including NTS, for burial of certain materials

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Commitment to Open Communication

- Fernald Site representatives and regulators stand ready to assist DOE-NV in communicating with its stakeholders and regulators.
- We value your comments on our remediation and waste management plans.

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