

# FERNALD CLEANUP PROGRESS BRIEFING MARCH 1998



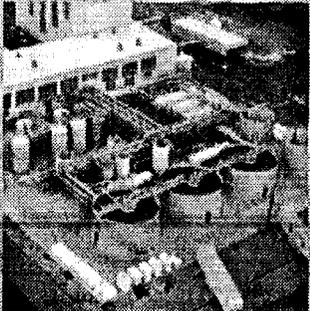
**OU4 - Silos Project**



**OU1 - Waste Pits Remedial Action Project**



**Waste Management Project**



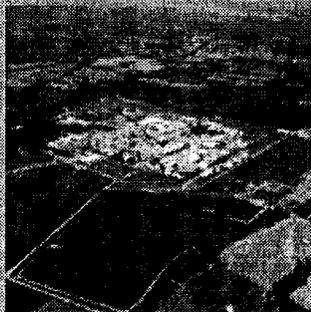
**OU5 - Aquifer Restoration/Wastewater Project**



**OU3 - Facilities Closure & Demolition Project**



**OU2 - On-Site Disposal Facility Project**



**Project Management**



**OU5 - Soil Characterization & Excavation Project**

# FERNALD CLEANUP PROGRESS BRIEFING

## MARCH 1998

**6:30 p.m. Opening Remarks**

**Gary Stegner**

**6:45 p.m. Project Updates**

**OU1 - Waste Pits Remedial Action Project**

**Dave Lojek**

**OU2 - On-Site Disposal Facility Project**

**Mike Hickey**

**OU3 - Facilities Closure & Demolition Project**

**John Trygier**

**OU4 - Silos Project**

**Nina Akgunduz**

**OU5 - Aquifer Restoration/Wastewater Project**

**John Kappa**

**OU5 - Soils Characterization & Excavation Project**

**Rob Janke**

**Waste Management**

**John Sattler**

**Project Management**

**Johnny Reising**

**-- Break --**

**7:45 p.m. Fernald Environmental  
Monitoring Program**

**Kathi Nickel**

**Mark Cherry**

**8:30 p.m. Adjourn**

# PROJECT NEWS

## OU1 - WASTE PITS REMEDIAL ACTION PROJECT

- **Remedial design plan available for public inspection**
- **Waste transportation and disposal issues**
- **Field work continuing**

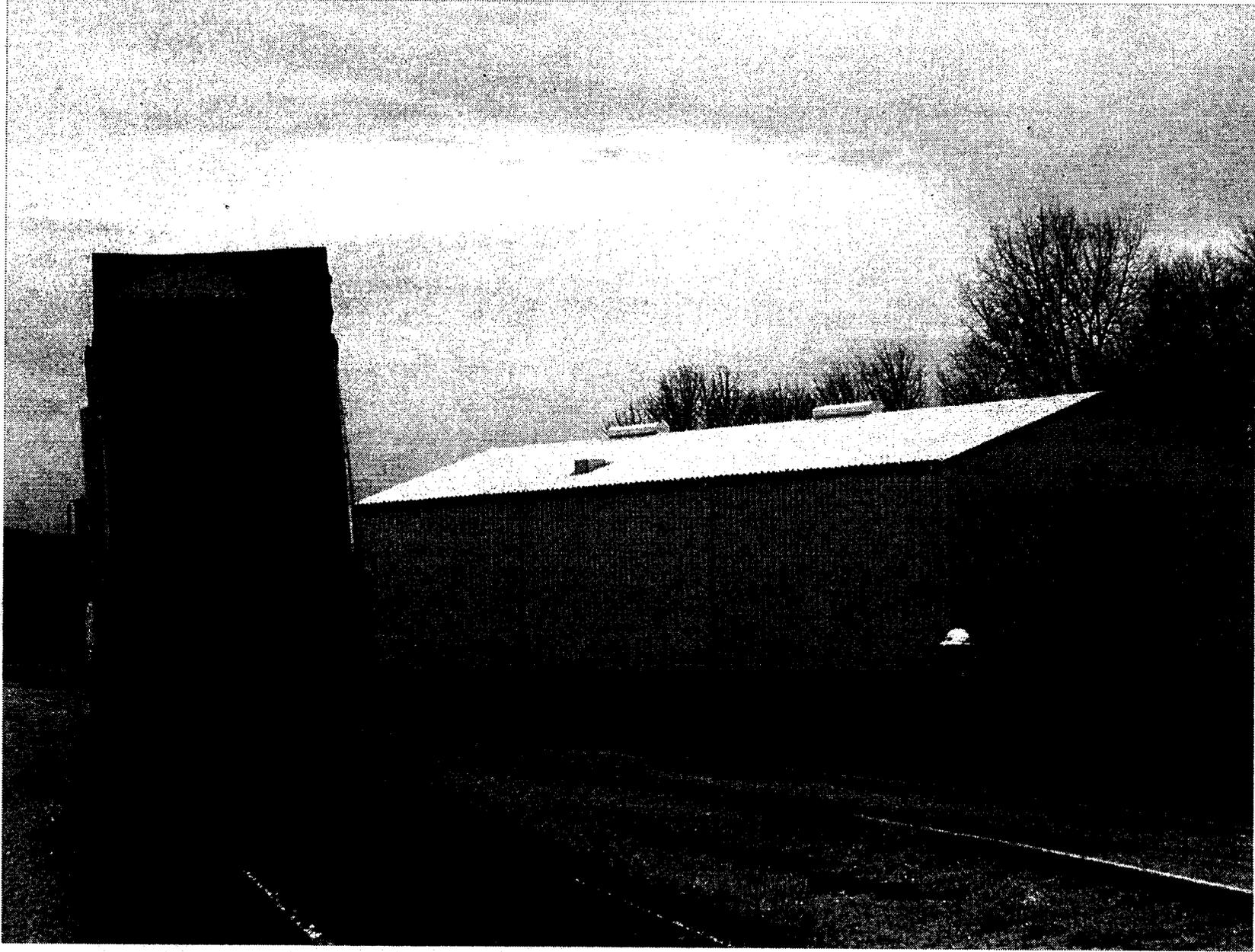
SHANDON YARD  
FEBRUARY 1998

4



# LOCOMOTIVE MAINTENANCE FACILITY

## FEBRUARY 1998



Graphics # 4968.1C 3/98 Photo # 6349D-1302

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# ON-SITE TRACK LEVELING FEBRUARY 1998



# PROJECT NEWS

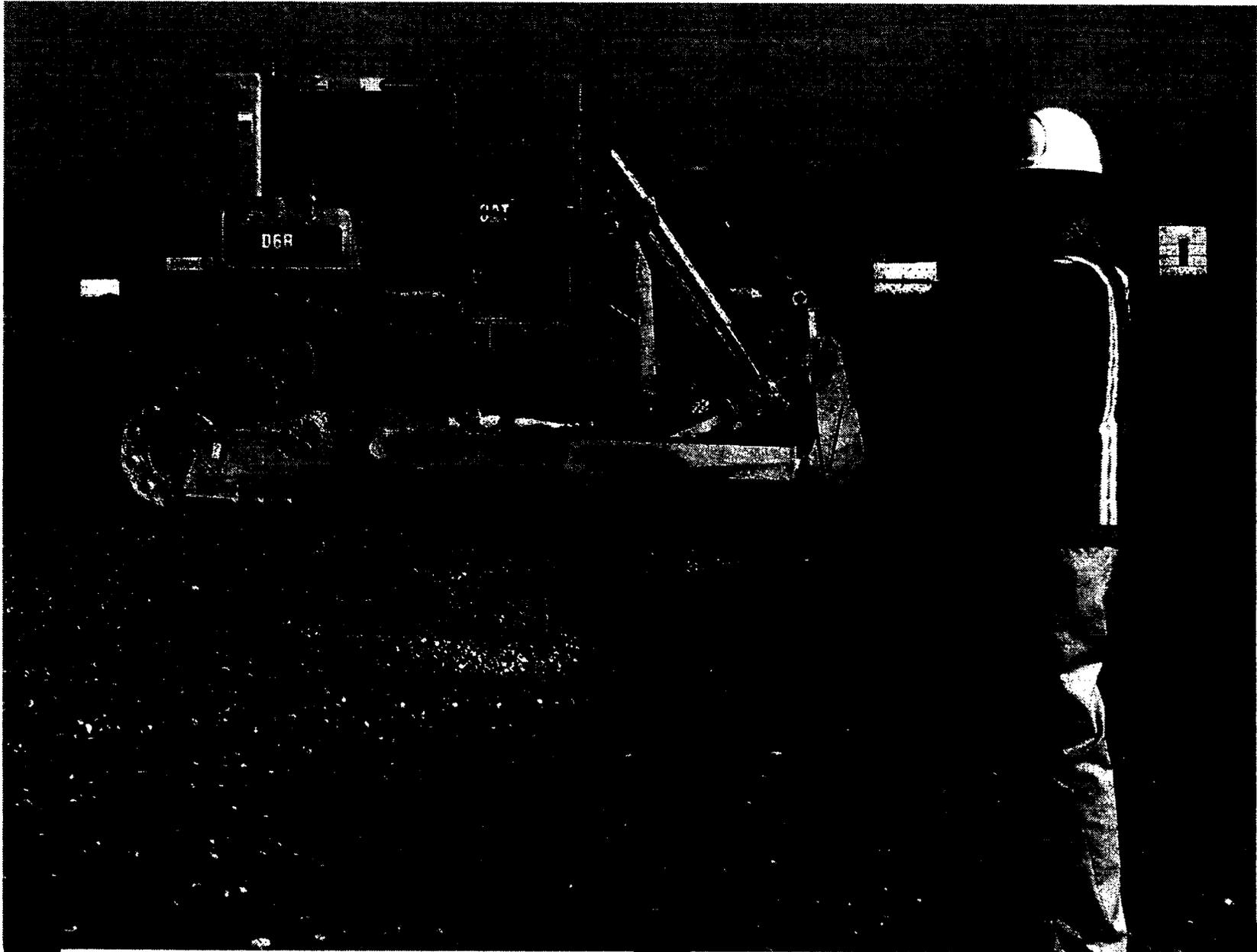
## OU2 - ON-SITE DISPOSAL FACILITY

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- **Description and function of transfer area**
- **Schedule for the 1998 Construction Season**
- **Approach on placing soil/debris in Cell 1**

# OSDF - TRANSFER AREA

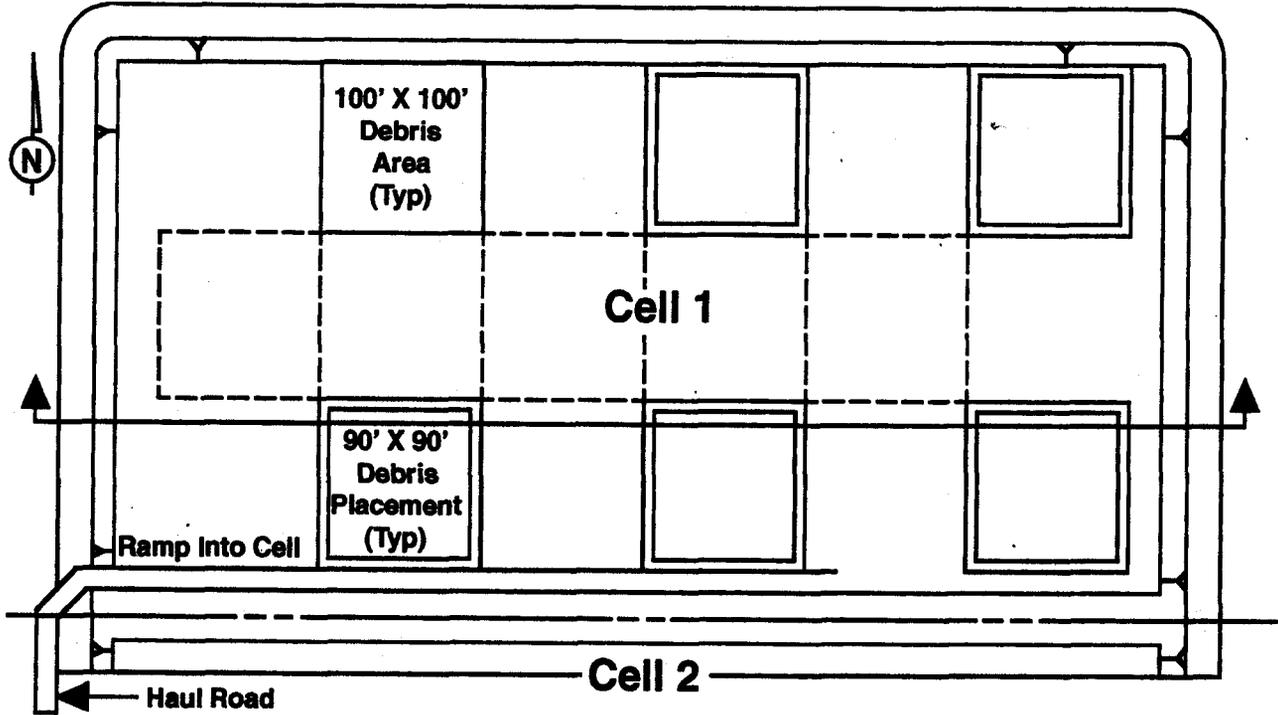
## FEBRUARY 1998



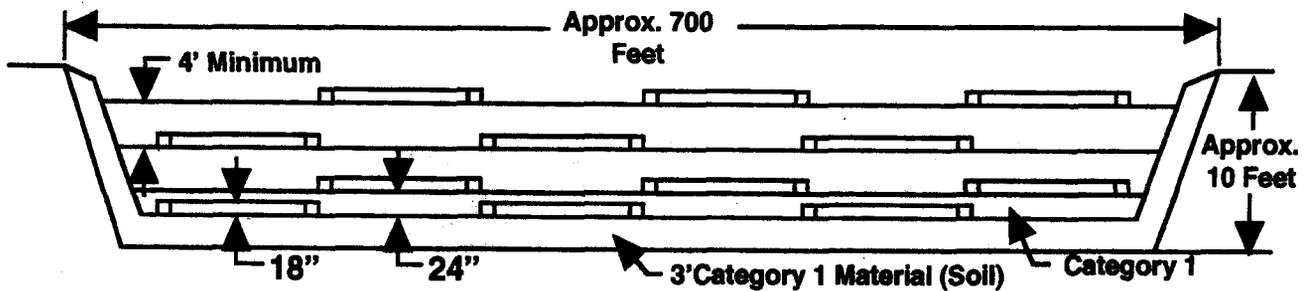
# OSDF FEBRUARY 1998



# POSSIBLE DEBRIS PLACEMENT PATTERN



## Top View



## Cross Section

# PROJECT NEWS

## OU3 - FACILITIES CLOSURE & DEMOLITION PROJECTS

- **Plant 8 Safe Shutdown**
- **Portions of Boiler Plant removed**
- **Maintenance/Tank Farm plan submitted**

# FORMER PROCESS AREA NOVEMBER 1997

12



1327

PLANT 9  
FEBRUARY 1998

13



# BOILER PLANT FEBRUARY 1998

14



# BOILER PLANT FEBRUARY 1998



# PROJECT NEWS

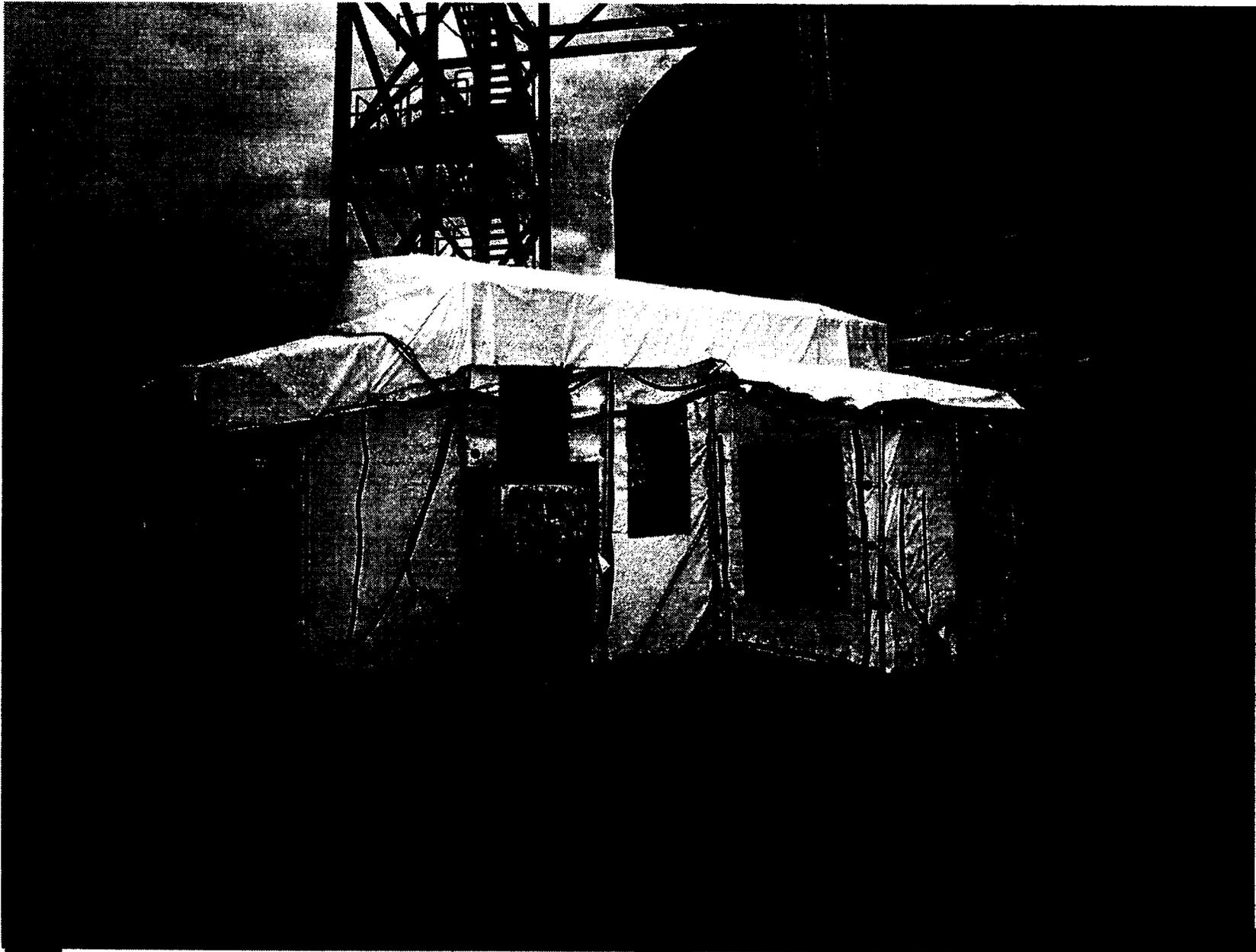
## OU4 - SILOS PROJECT

- **Public involvement critical to Silos Project path forward**
- **Final Request for Proposal for Silos 1 & 2 Proof-of-Principle testing issued**
- **EPA approval of Silo 3 Explanation of Significant Differences expected**
- **Silo 3 Small Scale Waste Retrieval System Operability Test and Mock-up continuing**

# SMALL SCALE WASTE RETRIEVAL MOCK-UP

## JANUARY 1998

5



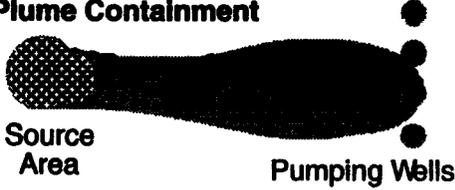
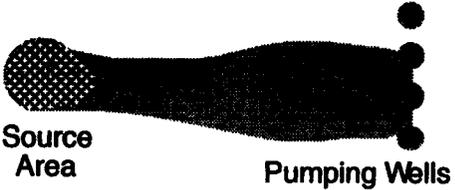
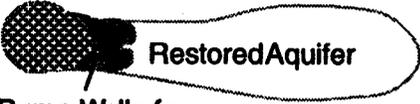
# **PROJECT NEWS**

## **OU 5 - AQUIFER RESTORATION/ WASTEWATER PROJECT**

- **Plume containment/remediation**
- **Pumping wells strategy**
- **Projected schedule for restoring aquifer**

# GROUNDWATER RESTORATION STRATEGIES

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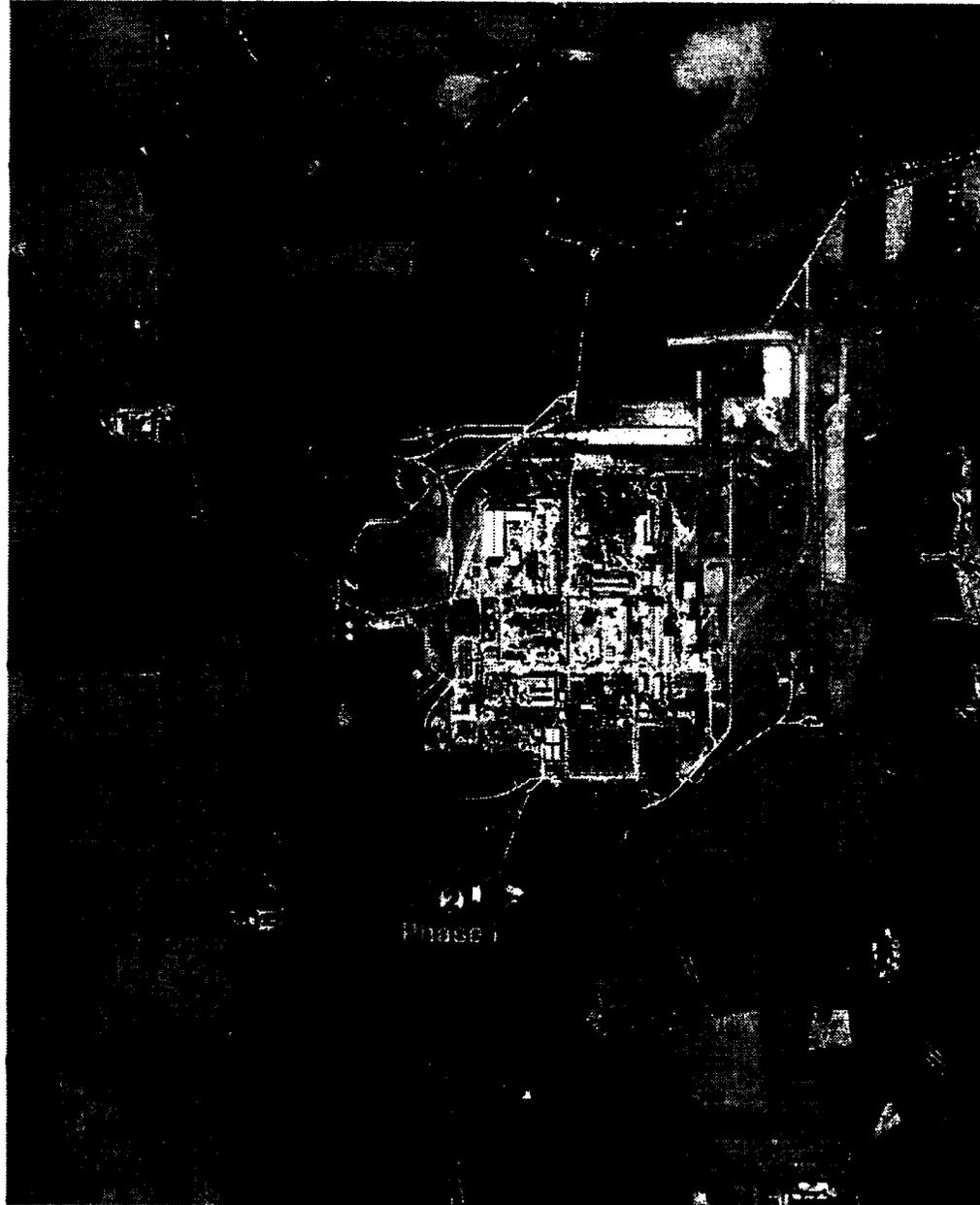
TODAY	FUTURE
<p><b>Plume Containment</b></p>  <p>Source Area                      Pumping Wells</p>	 <p>Source Area                      Pumping Wells</p>
<p><b>Plume Cut-Off</b></p> 	<p>Natural Attenuation</p> 
<p><b>Downgradient Aquifer Restoration</b> Pumping Wells for Cleanup</p>  <p>Pump Wells for Source Containment</p>	 <p>Restored Aquifer</p> <p>Pump Wells for Source Containment</p>
<p><b>Aquifer Restoration</b> Pumping Wells for Cleanup</p>  <p>Source Removed</p>	 <p>Restored Aquifer</p>

# PROJECT NEWS

## OU 5 - SOILS CHARACTERIZATION & EXCAVATION PROJECT

- **Southern Waste Units Construction work continues:**
  - **Pumps and piping system**
  - **Retention basins**
  - **Equipment wash facility**

# SOUTHERN WASTE UNITS SOIL REMEDIATION



# SOUTHERN WASTE UNITS

## FEBRUARY 1998



# SOUTHERN WASTE UNITS

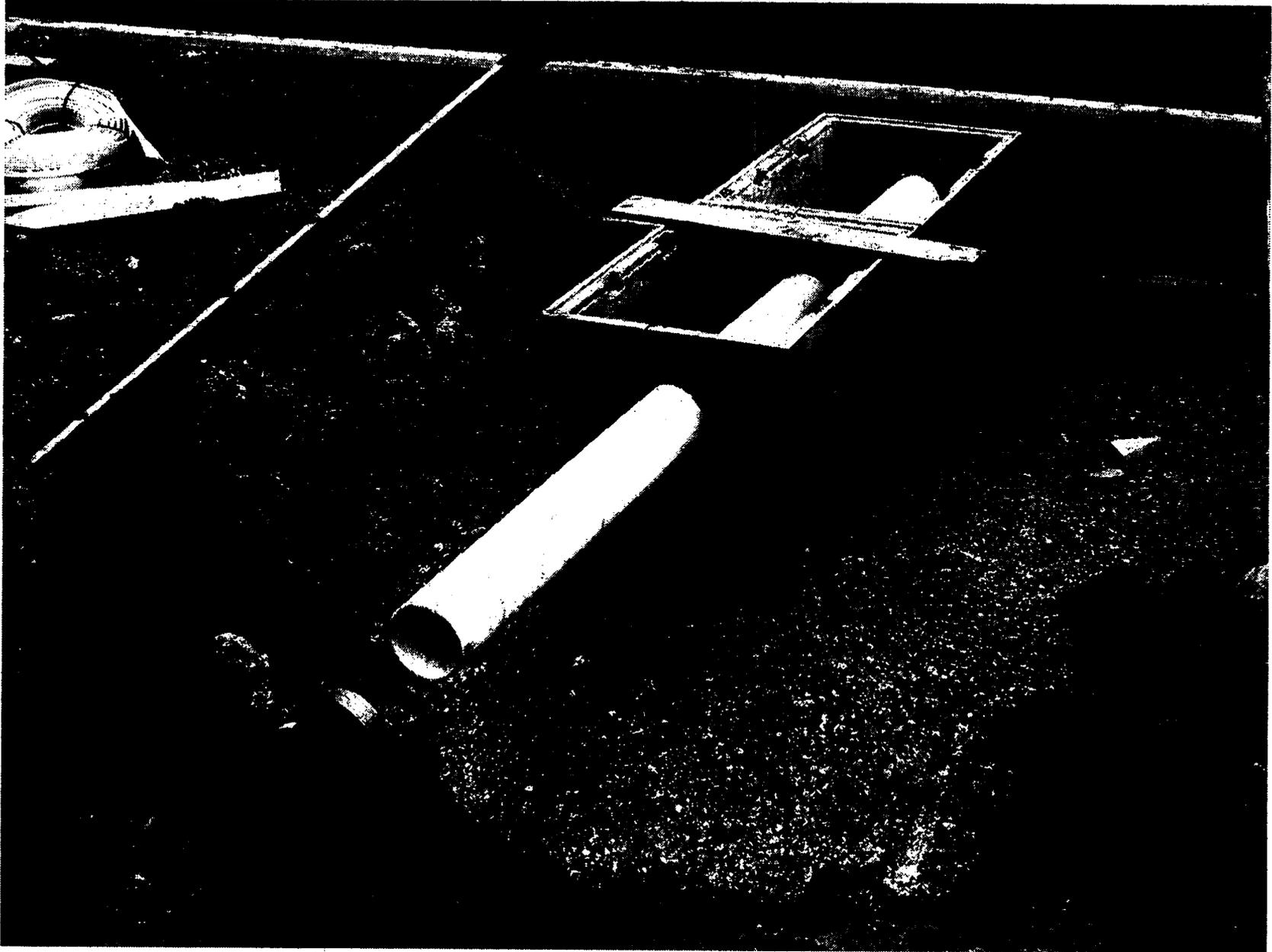
## FEBRUARY 1998

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# SOUTHERN WASTE UNITS

## FEBRUARY 1998



# SOUTHERN WASTE UNITS

## FEBRUARY 1998



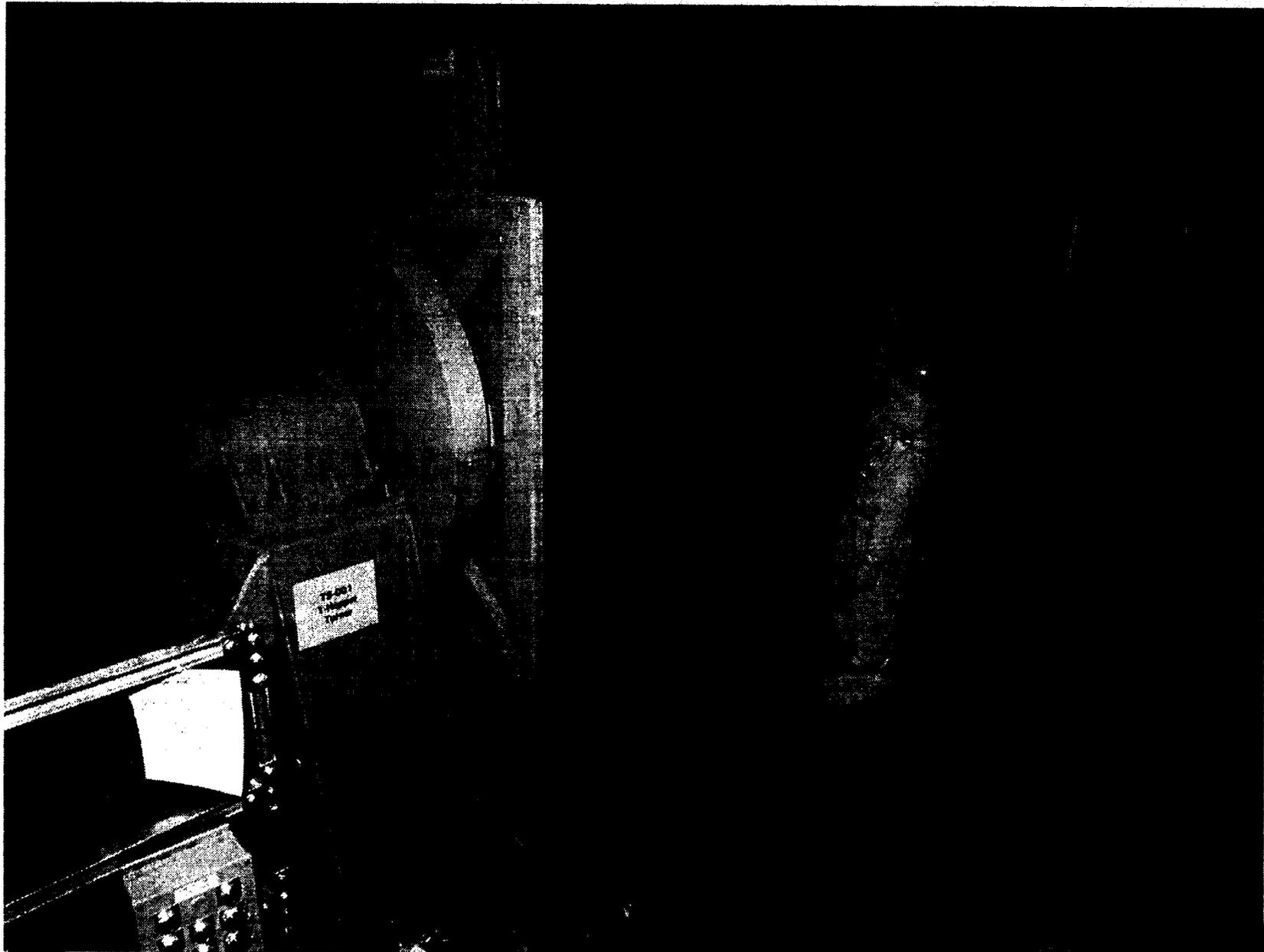
# PROJECT NEWS

## WASTE MANAGEMENT

- **T-Hopper material being repackaged**
- **British Nuclear Fuels Limited metals transported**
- **White Metal Box corrective actions**

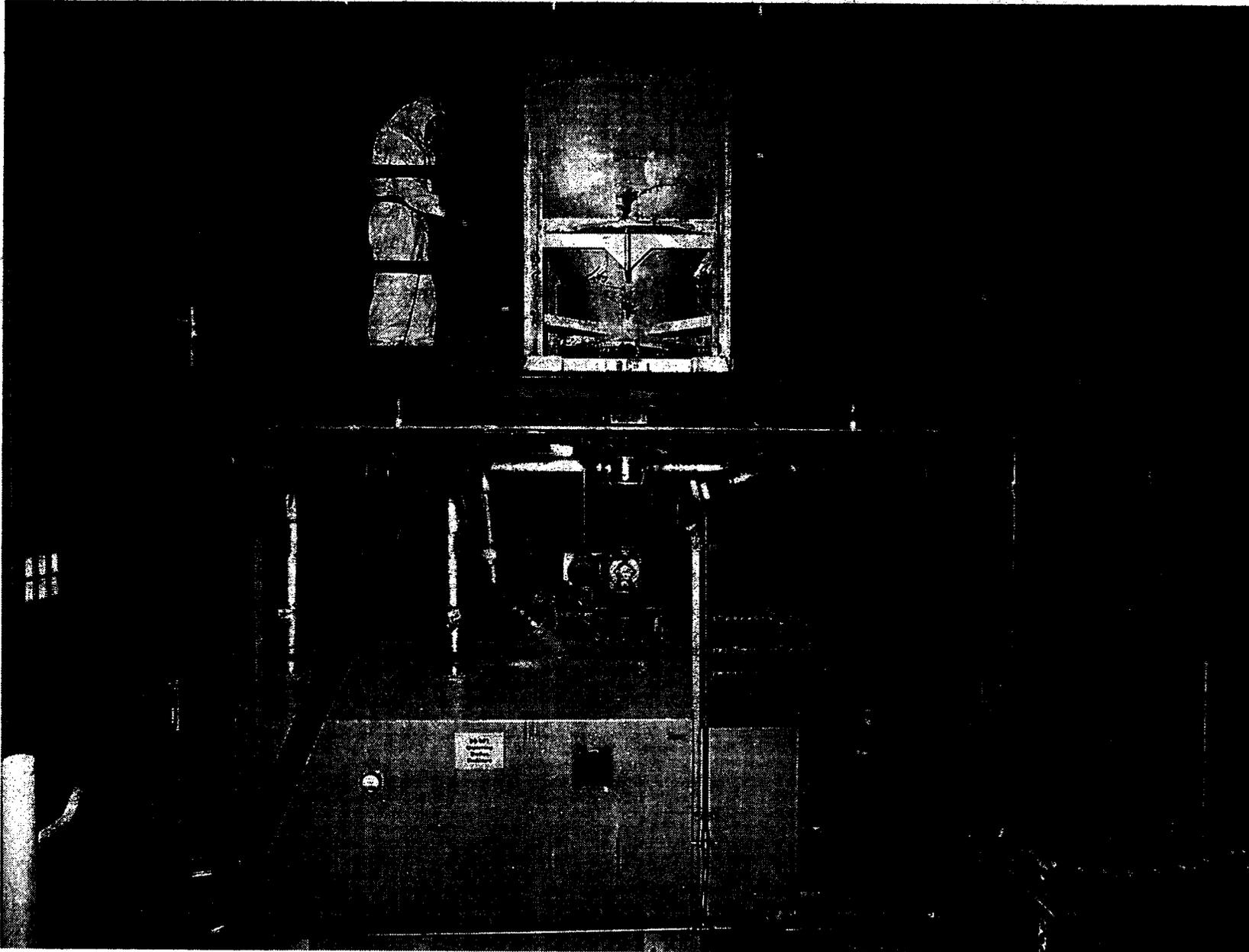
# T-HOPPER REPACKAGING STATION FEBRUARY 1998

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# T-HOPPER REPACKAGING STATION

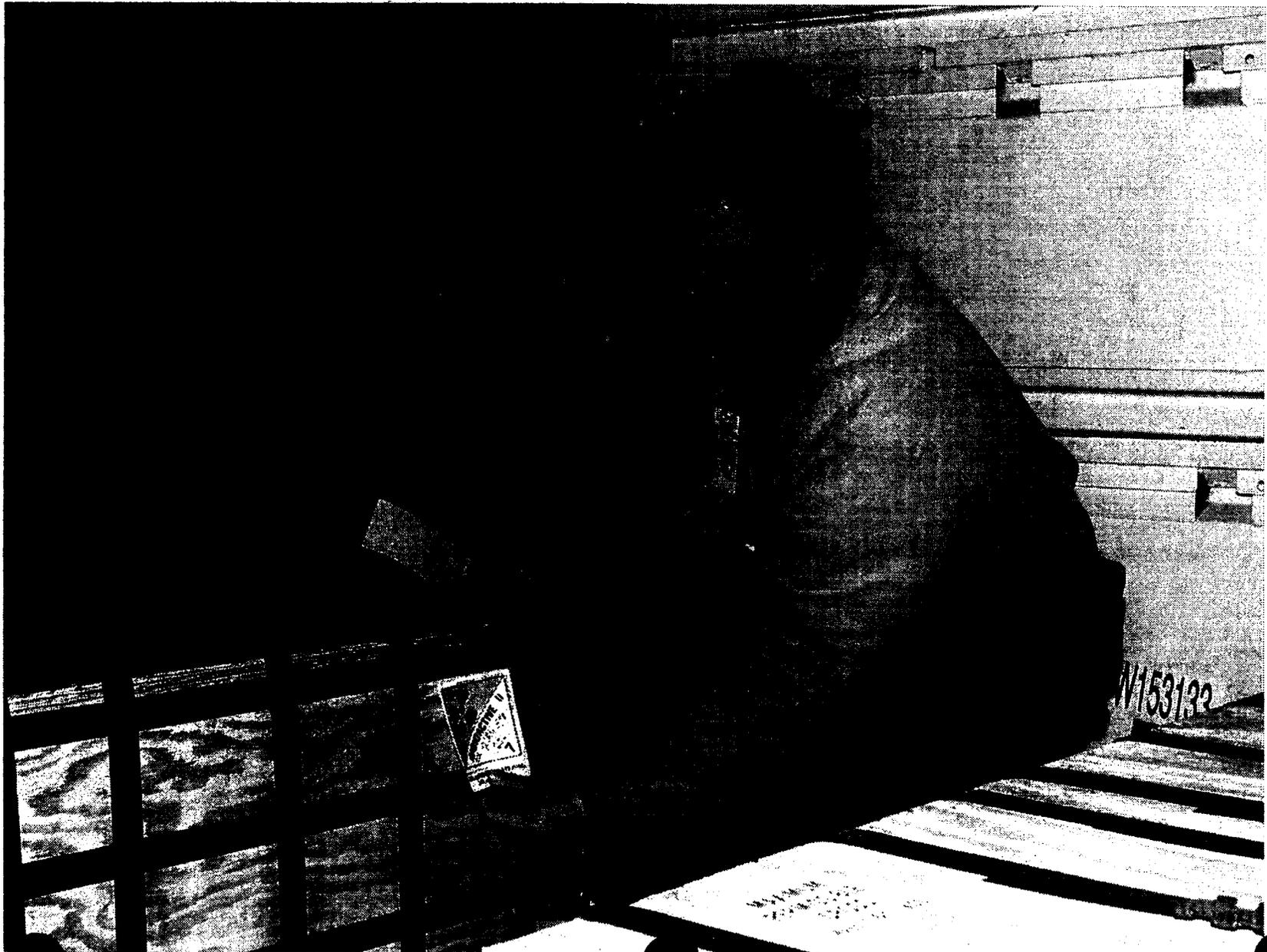
## FEBRUARY 1998



# INGOT SHIPPING

## FEBRUARY 1998

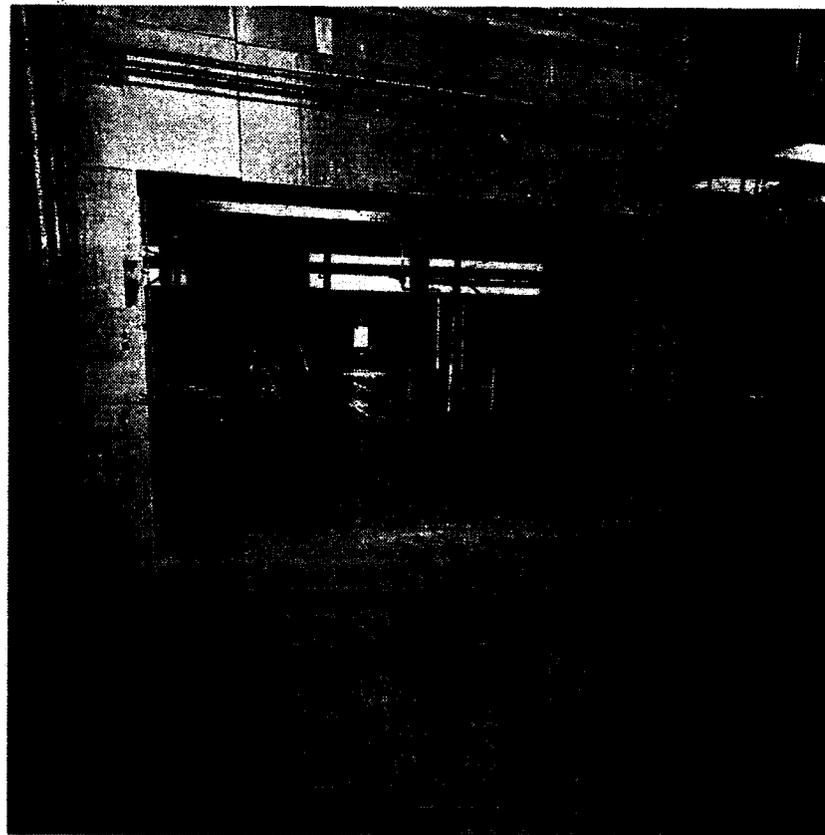
22



# DEPLETED INGOTS

## JULY 1997/FEBRUARY 1998

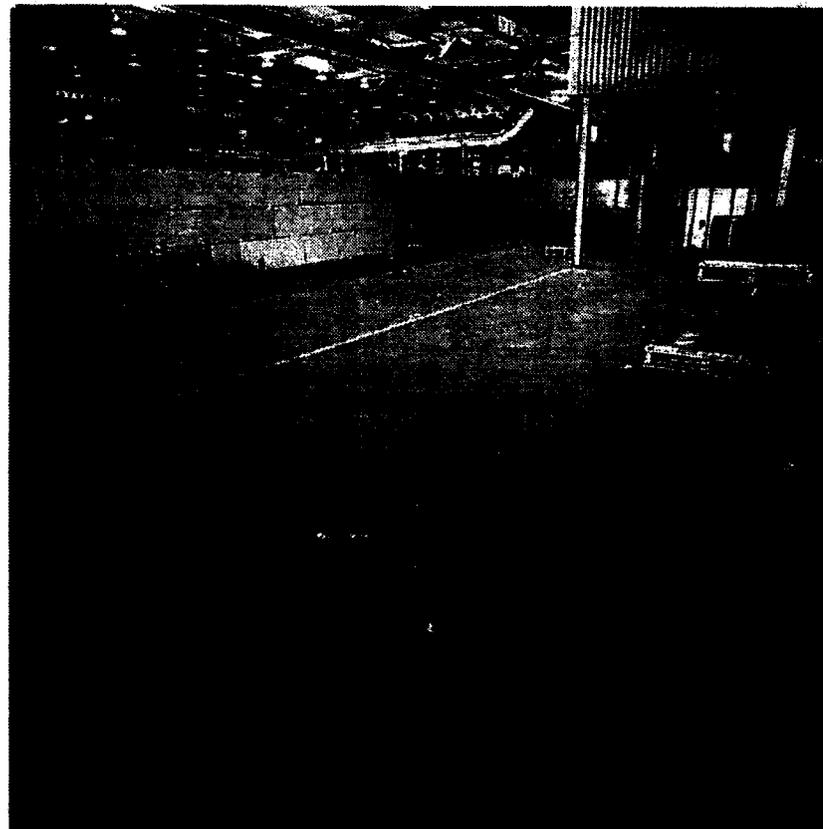
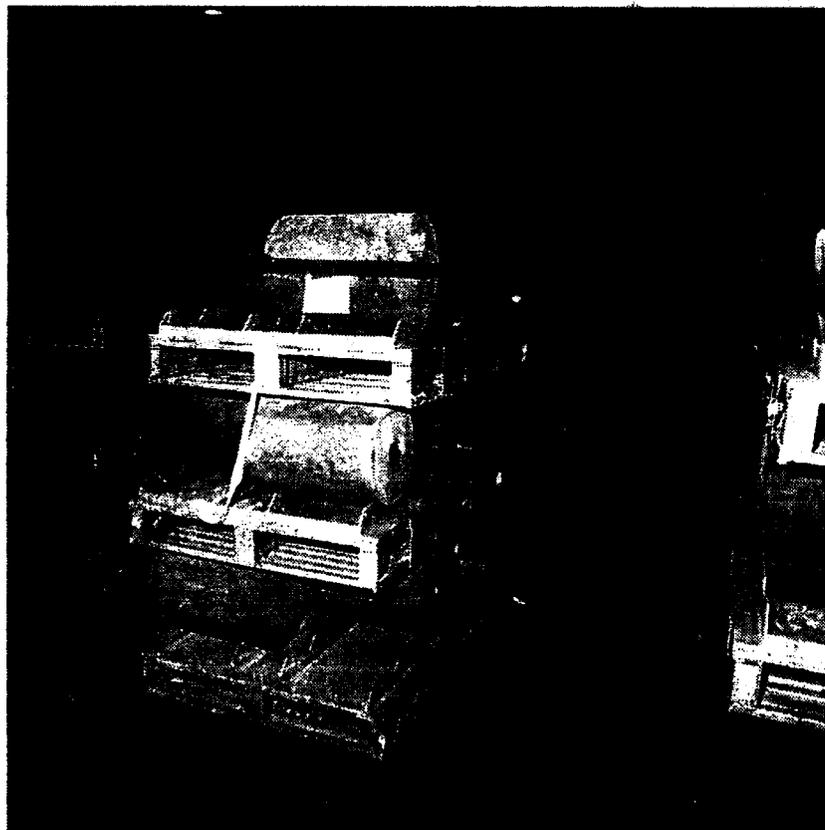
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# ENRICHED INGOTS

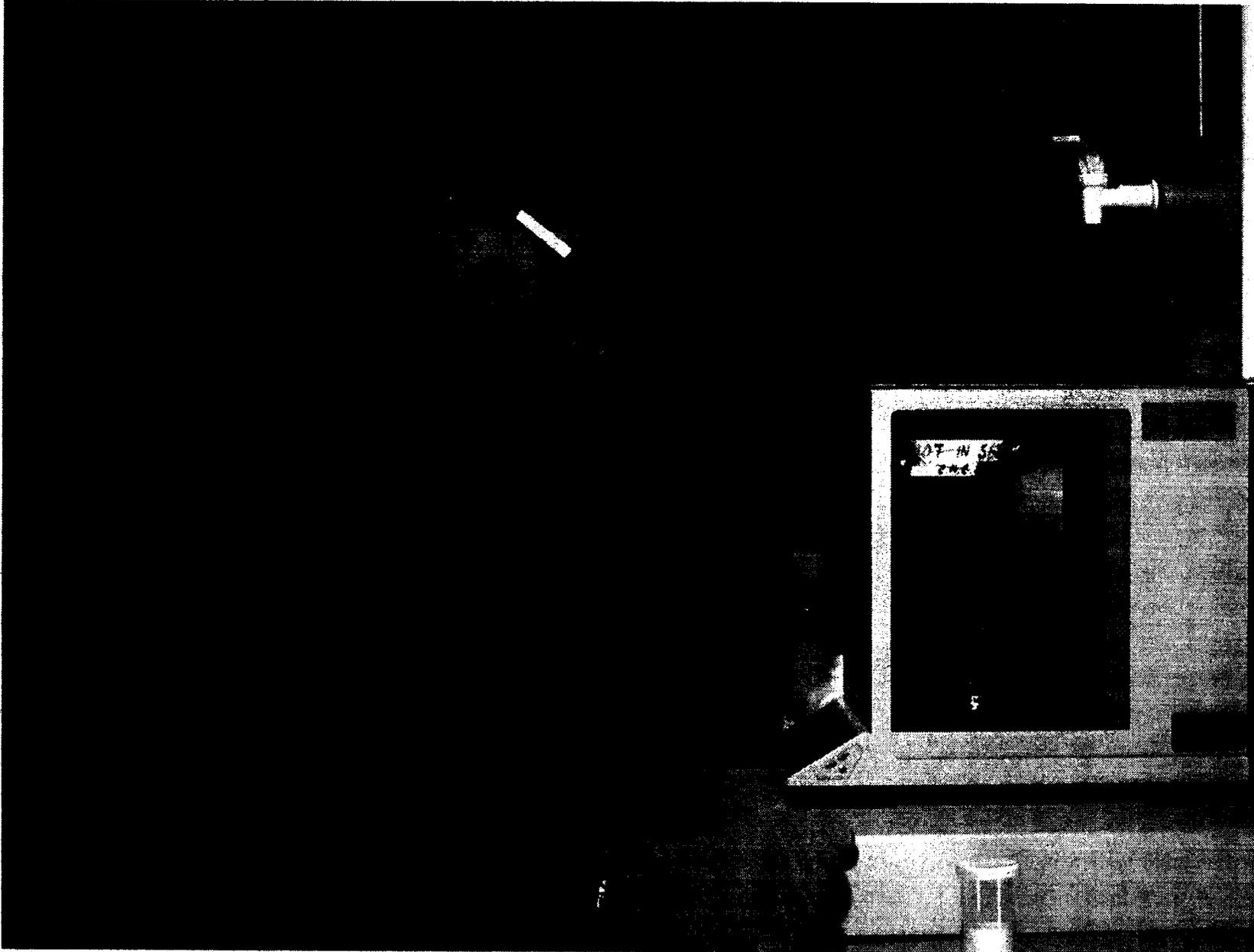
## MARCH 1994/FEBRUARY 1998

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# ABSORBENT TESTING

## FEBRUARY 1998



# PROJECT NEWS

## PROJECT MANAGEMENT

### Ohio "Accelerated" Plan

- DOE-FEMP submitted revised draft to DOE-OH - 11/11/97
- Ohio Field Office revised Draft Site Narratives - available 3/2/98

### National "Accelerated" Plan Review

- The national cleanup strategy "Accelerating Cleanup: Paths to Closure" released for 60-day public comment - 3/2/98

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# **PROJECT NEWS**

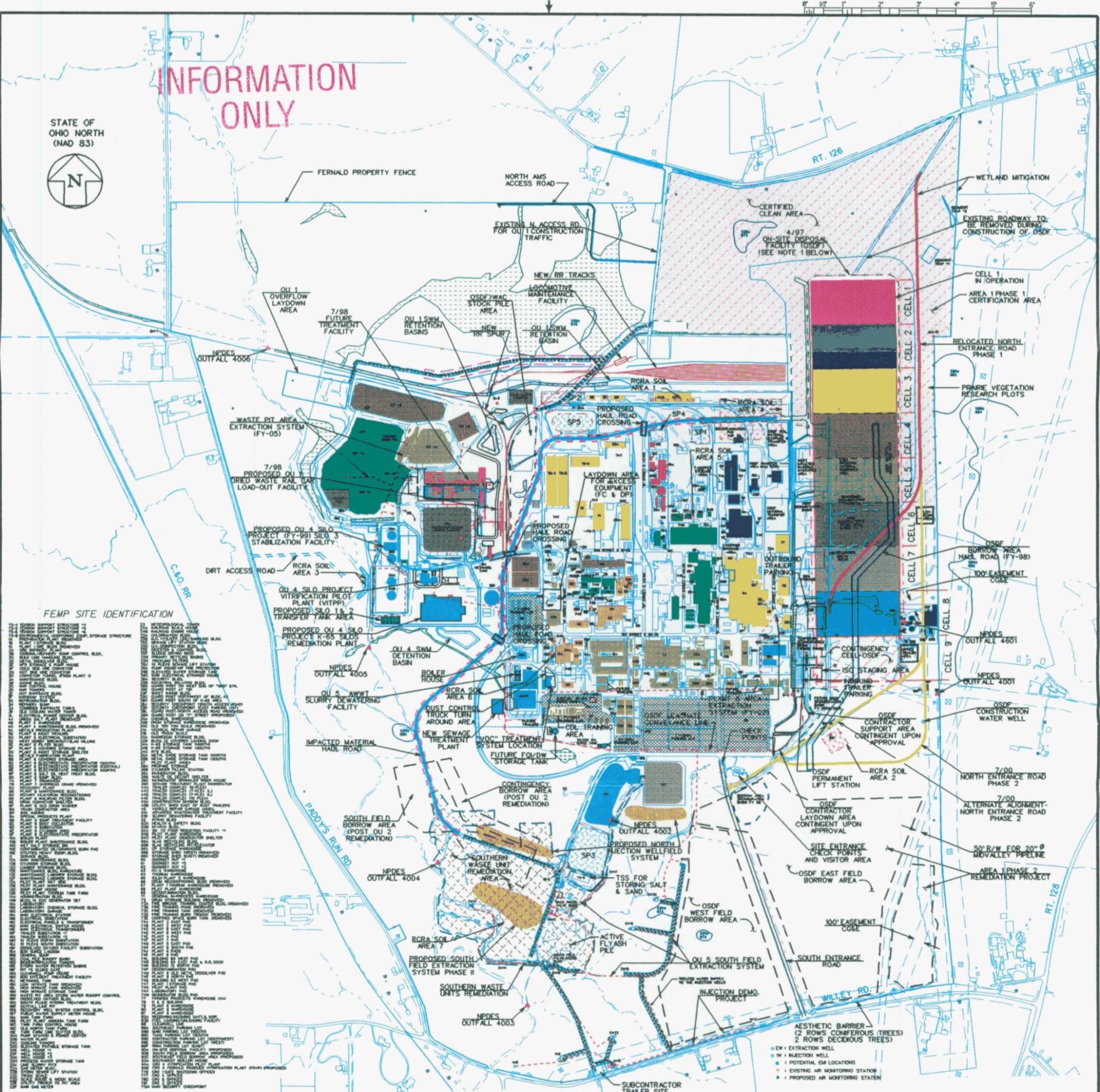
## **PROJECT MANAGEMENT**

### **FY99 Replan Change Proposal**

- **Fluor Daniel Fernald supplied DOE-FEMP with FY99 change proposal - 12/15/97**
- **DOE-FEMP submitted comments to Fluor Daniel Fernald - 1/27/98**
- **Fluor Daniel Fernald response to comments - 2/27/98**
- **Change proposal being revised based on comments; DOE-FEMP approval mid to late March**

# INFORMATION ONLY

STATE OF OHIO NORTH (NAD 83)



**FEMP SITE IDENTIFICATION**

1	EXISTING REPORT STRUCTURE #1	151	EXISTING REPORT STRUCTURE #1
2	EXISTING REPORT STRUCTURE #2	152	EXISTING REPORT STRUCTURE #2
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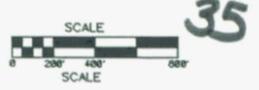
### LEGEND

SYMBOL	TITLE	SYMBOL	TITLE
	IMPACTED MATERIAL HAUL ROAD - NEW SURFACE		CERTIFIED CLEAN AREA
	NEW ACCESS ROAD - GRAVEL SURFACE		SOIL PILE AREA (SP1 -- SP5)
	EXISTING GRAVEL ROAD -		RCRA CHARACTERISTIC SOIL AREAS (SUMP PUMP, AREA NEAR KC-2 W/SE, TRAP RANGE, FILL MTL WEST OF SILOS, SCRAP METAL PILE REA & AREA NORTH OF MAINT BLDG)
	EXISTING UPGRADED GRAVEL ROAD -		WETLAND AREA - REGULATED
	NEW GRAVEL ROAD -		DREGED AND/OR FILLED WETLAND
	NEW ENTRANCE ROAD (BIT. PAVE.)		HISTORIC CULTURAL RESOURCE SITE
	PHASE II ENTRANCE ROAD (BIT. PAVE.)		
	EXISTING PAVED ROADWAY -		
	NEW RAIL (OU 1)		
	UNDERGROUND LEACHATE LINE OR INJECTION/EXTRACTION WELL LINE (SEE LABEL)		
	M-3		
	4001		
	PERMITTED NPDES OUTFALL		

### PROPOSED DISPOSAL FACILITY CONSTRUCTION AND BUILDING DAD ACTIVITIES BY FISCAL YEAR OF INITIATION (FY 99 REPLAN GUIDANCE)

	FY-1997		FY-2003
	FY-1998		FY-2004
	FY-1999		FY-2005
	FY-2000		FY-2007
	FY-2001		BEYOND FY-2007
	FY-2002		

NOTE: 1. ON-SITE DISPOSAL FACILITY COLOR SCHEME REFERS TO CONSTRUCTION OF CELL LINERS.  
 2. BUILDING WITH COLOR SHADED DENOTE D&D YEAR.  
 3. FOR WASTE PITS, STORM BASINS, LAGOONS, ETC. COLOR INDICATES REMEDIATION YEAR.



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THESE DESIGNS MAY BE MODIFIED ONLY BY THE GUIDELINES DICTATED IN THE SITE PROCEDURE ED-12-5005 "LAND USE AUTHORITY"

NO.	REVISIONS	DATE	DWN. BY	APPD.	REF. DWG. NO.
7	UPDATED TO REFLECT FY 99 WORK SCHEDULES TO 10/1/99	10/1/99	M. LINDREN	G.E.P.	
6	ADDED REPORT STRUCTURE #100	8/15/99	W. LIU	G.E.P.	
5	REMOVED N ACCESS RD, UPDATED RR TRACKS, ENR/MS, AIR N, ODF'S AREA, ETC.	4/15/99	W. LIU	G.E.P.	
4	ADDED N ACCESS RD, ADDED ENR/MS, ODF'S SEDIMENTATIONS, & MISC. ETC.	6/15/98	W. LIU	G.E.P.	00X-5500-X-02046
3	ADDED ENTRANCE/MODIFIED GRAVEL ROAD/R/R TRACK/NORTH ACCESS RD.	6/15/98	W. LIU	G.E.P.	00X-5500-X-02045
2	ADDED RA-WORK PLAN, SPA & RCRA SOIL AREAS ETC.	3/26/98	W. LIU	G.E.P.	00X-5500-X-02044
1	ADDED SITE D&D FACILITIES	8/17/98	W. LIU	G.E.P.	00X-5500-X-02043

FLUOR DANIEL FERNALD CAD DRAWING, DO NOT REVISE MANUALLY.

PERFORMANCE GRADE	1	2	3	4	5
BY/D. G. LINDREN (DATE)					

REAL PROPERTY	CIVIL & STR.	ELECTRICAL	ENGINEER	INSTRUMENT	MECHANICAL	E.E.T.	CHECKED	APPROVED
D. J. DAVLAND	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
S. J. WENZEL	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
M. KOPP	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
R. RENNERT	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
DAVE B.	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
D. CAPELLI	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98
G.E. PAUL	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98	V/S/98

Fernald Environmental Management Project

**FLUOR DANIEL FERNALD**

U.S. DEPARTMENT OF ENERGY

LAND USE AUTHORITY MASTER PLOT OVERALL PLAN

RES 2207/P000 TASK 14  
DATE 4-15-97  
DRAWN WDC/LJ

00X-5500-X-02042 7

FILE NAME: /usr2/aegroups/model/00x2042.dgn

## OU1 -- WASTE PITS REMEDIAL ACTION PROJECT (WPRAP)

FEBRUARY 1998	
Major Work Activities	Enforceable Milestones
<p><b>Improvements/Upgrades/Construction</b></p> <ul style="list-style-type: none"> <li>• Continued on-site rail infrastructure construction</li> <li>• Continued Shandon Yard upgrade construction</li> </ul>	None
<p><b>IT Corporation Subcontract (ARASA)</b></p> <ul style="list-style-type: none"> <li>• Continued developing/finalizing pre-mobilization subcontract deliverables</li> <li>• Submitted Draft Remedial Design Package to DOE for further submittal to Agencies (includes such items as Pre-Operational Health &amp; Safety Plan, Site Preparation Package, Excavation Plan, etc.)</li> </ul>	
<p><b>Planning &amp; Contracts</b></p> <ul style="list-style-type: none"> <li>• Awarded contract for construction of rail &amp; access road lighting</li> <li>• Incorporated DOE comments into Transportation &amp; Disposal Plan</li> <li>• Continued development of Draft Waste Management Plan</li> </ul>	
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<p><b>Improvements/Upgrades/Construction</b></p> <ul style="list-style-type: none"> <li>• Complete Locomotive Maintenance Facility utilities installation</li> <li>• Complete Shandon Yard &amp; on-site rail infrastructure upgrades</li> <li>• Initiate rail &amp; access road lighting construction</li> </ul>	<p>Submit IT's Draft Remedial Design Package to Agencies by 4/9/98</p> <p>Submit Draft Transportation &amp; Disposal Plan to Agencies by 4/30/98</p>
<p><b>IT Corporation Subcontract (ARASA)</b></p> <ul style="list-style-type: none"> <li>• Continue developing/finalizing pre-mobilization subcontract deliverables</li> <li>• Initiate development of Draft Remedial Action Package (EPA submittal)</li> </ul>	
<p><b>Planning &amp; Contracts</b></p> <ul style="list-style-type: none"> <li>• Award contract for railcar procurement</li> <li>• Complete Draft Waste Management Plan &amp; conduct internal review</li> </ul>	

## OU2 -- ON-SITE DISPOSAL FACILITY PROJECT (OSDF)

FEBRUARY 1998	
Major Work Activities	Enforceable Milestones
<p><b><i>On-Site Disposal Facility (OSDF)</i></b></p> <ul style="list-style-type: none"> <li>• Began construction of OSDF Material Transfer Area &amp; Decontamination Facility</li> <li>• Continued review of contractor proposals for OSDF Phase II/Southern Waste Units excavation contract; to be performed in conjunction with Soils Characterization &amp; Excavation Project</li> <li>• Performed regular inspection of Cell 1 seasonal cover; no maintenance necessary</li> </ul>	None
<p><b><i>Leachate Conveyance System</i></b></p> <ul style="list-style-type: none"> <li>• Continued completing outstanding punch list items</li> <li>• Operated system; performed routine maintenance as required</li> </ul>	
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<p><b><i>On-Site Disposal Facility (OSDF)</i></b></p> <ul style="list-style-type: none"> <li>• Complete construction of OSDF Material Transfer Area &amp; Decontamination Facility</li> <li>• Submit Consent Package for OSDF Phase II/Southern Waste Units excavation contract to DOE-FEMP</li> <li>• Install horizontal well for Cell 2</li> <li>• Place 2-ft. select impacted material layer into Cell 1 using material from East Stockpile</li> <li>• Continue regular inspection of seasonal cover; perform routine maintenance as required</li> </ul>	<p>Begin impacted material placement by 3/27/98; <b>this milestone was actually completed 12/23/97</b></p> <p>Complete construction of Haul Road &amp; Relocated North Entrance Road by 3/27/98; <b>this milestone was actually completed 12/5/97</b></p>
<p><b><i>Leachate Conveyance System</i></b></p> <ul style="list-style-type: none"> <li>• Continue work on outstanding punch list items, contingent upon weather conditions</li> <li>• Operate system &amp; perform routine maintenance</li> </ul>	

# OU3 -- FACILITIES CLOSURE & DEMOLITION PROJECTS (FC&DP)

FEBRUARY 1998		
Major Work Activities		Enforceable Milestones
<i>Safe Shutdown Project</i>		Submitted Maintenance/Tank Farm Complex D&D Implementation Plan to Agencies 2/27/98, meeting actual milestone date of 3/5/98 for combined complexes
<ul style="list-style-type: none"> <li>• Plant 8               <ul style="list-style-type: none"> <li>- Removed holdup material in selected areas</li> <li>- Isolated underground sewage line</li> <li>- Isolated fire suppression system</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Plant 6               <ul style="list-style-type: none"> <li>- Continued isolation of tank containing Sodium Hydroxide &amp; Sodium Sulfide mixture (will eventually involve drumming, coding &amp; storage of materials)</li> <li>- Sealed up Rolling Mill area</li> </ul> </li> </ul>	
<i>Decontamination &amp; Dismantlement (D&amp;D) Projects</i>		
<ul style="list-style-type: none"> <li>• Thorium/Plant 9 Complex               <ul style="list-style-type: none"> <li>- Continued preparation &amp; submittal of Safe Work Plans</li> <li>- Continued friable asbestos abatement, equipment removal &amp; interior demolition activities in Plant 9</li> </ul> </li> <li>• Sewage Treatment Plant Complex               <ul style="list-style-type: none"> <li>- Continued development of Implementation Plan</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Boiler Plant/Water Plant               <ul style="list-style-type: none"> <li>- Began demolition of Boiler Plant &amp; Coal Handling Area</li> <li>- Continued demolition of railroad tracks</li> <li>- Completed window removal at Boiler Plant</li> <li>- Completed demolition of Process Water Break Tank</li> </ul> </li> <li>• Maintenance/Tank Farm Complex               <ul style="list-style-type: none"> <li>- Continued development of Implementation Plan</li> </ul> </li> </ul>	
60-DAY LOOK AHEAD		
Anticipated Work Activities		Enforceable Milestones
<i>Safe Shutdown Project</i>		None
<ul style="list-style-type: none"> <li>• Plant 2/3               <ul style="list-style-type: none"> <li>- Continue asbestos removal</li> <li>- Complete holdup material removal in selected areas</li> </ul> </li> <li>• Plant 6               <ul style="list-style-type: none"> <li>- Continue biohazard cleanup</li> <li>- Continue utility disconnects</li> <li>- Complete control point setup</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Plant 8               <ul style="list-style-type: none"> <li>- Complete all holdup material removal, utility disconnects &amp; "turnover package"</li> <li>- Turn building over to Site Facilities Services</li> </ul> </li> <li>• Non-Nuclear Facilities               <ul style="list-style-type: none"> <li>- Complete utility disconnects at Tank Farm Complex</li> <li>- Complete excavations on underground utility lines to Boiler Plant</li> </ul> </li> </ul>	
<i>D&amp;D Projects</i>		
<ul style="list-style-type: none"> <li>• Thorium/Plant 9 Complex               <ul style="list-style-type: none"> <li>- Perform structural D&amp;D of Magnesium Storage Building</li> <li>- Begin building preparation activities in &amp; around Buildings 69 &amp; 78</li> <li>- Continue friable asbestos abatement, equipment removal &amp; interior demolition in Plant 9; initiate same activities in Building 69</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Boiler Plant/Water Plant               <ul style="list-style-type: none"> <li>- Complete Boiler Plant transite removal</li> <li>- Continue sizing, segregation &amp; containerization of demolition debris</li> </ul> </li> <li>• Sewage Treatment Plant Complex               <ul style="list-style-type: none"> <li>- Submit Implementation Plan to Agencies</li> </ul> </li> </ul>	

## OU4 -- SILOS PROJECT

FEBRUARY 1998	
Major Work Activities	Enforceable Milestones
<p><b>Silos 1 &amp; 2</b></p> <ul style="list-style-type: none"> <li>• Issued Request for Proposal (RFP) for Proof of Principle Testing on 2/11/98</li> <li>• Commenced preparation of initial sections of Silos 1 &amp; 2 Feasibility Study revision</li> <li>• Continued preparation of Draft RFP for Accelerated Waste Retrieval (AWR) Project</li> <li>• Transmitted Draft National Environmental Policy Act (NEPA) Supplemental Analysis for AWR Project to DOE-Ohio Field Office for approval</li> </ul>	None
<p><b>Silo 3</b></p> <ul style="list-style-type: none"> <li>• Received approval from DOE-Ohio Field Office on Final Silo 3 Explanation of Significant Differences (ESD) &amp; submitted document to U.S. EPA for signature</li> <li>• Revised Draft Silo 3 RFP to incorporate off-site treatment; initiated internal reviews</li> <li>• Continued System Operability/Mock-Up Testing of Silo 3 Small Scale Waste Retrieval at Silo 4</li> </ul>	
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<p><b>Silos Project --- General</b></p> <ul style="list-style-type: none"> <li>• Hold public meeting to discuss Silos Project Public Involvement plans on 3/4/98</li> </ul>	None
<p><b>Silos 1 &amp; 2</b></p> <ul style="list-style-type: none"> <li>• Conduct pre-proposal meeting on Proof of Principle Testing RFP with DOE, Fluor Daniel Fernald &amp; interested contractors on 3/3/98; receive proposals by 3/31/98 &amp; begin evaluations</li> <li>• Make Scope of Work, Evaluation Criteria &amp; Technical Requirements Document summary from AWR RFP available for 30-day public review -- hold public meeting to educate stakeholders about document contents.</li> </ul>	
<p><b>Silo 3</b></p> <ul style="list-style-type: none"> <li>• Obtain U.S. EPA approval of Final ESD &amp; prepare Remedial Design Work Plan</li> <li>• Obtain Contract Review Board approval of RFP; submit RFP to DOE for acceptance</li> <li>• Initiate installation of Small Scale Waste Retrieval equipment at Silo 3 &amp; begin operations</li> </ul>	

# OU5-- AQUIFER RESTORATION/WASTEWATER PROJECT

FEBRUARY 1998	
Major Work Activities	Enforceable Milestones
<p>Started pipeline installation for South Plume Optimization Project</p>	<p>Submitted monthly National Pollutant Discharge Elimination System (NPDES) Discharge Monitoring Report to Ohio EPA 2/12/98 (for 1/98)</p> <p>Met 20 parts per billion monthly average uranium discharge to Great Miami River</p> <p>Submitted Ohio Department of Natural Resources Water Withdrawal Report 2/27/98, meeting actual milestone date of 3/1/98</p>
<p>Continued construction/readiness efforts on following projects:</p> <ul style="list-style-type: none"> <li>• Advanced Wastewater Treatment (AWWT) Facility Expansion</li> <li>• AWWT Resin Regeneration System</li> <li>• New Sewage Treatment Plant (STP)</li> </ul>	
<p>Completed Construction Acceptance Testing (CAT), System Operability Testing (SOT) &amp; Standard Startup Review (SSR) on AWWT Resin Regeneration System</p>	
<p>Performed first ion exchange regeneration activities using new AWWT Resin Regeneration System</p>	
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<p>Complete construction/perform Integrated CAT, SOT &amp; SSR activities on following projects:</p> <ul style="list-style-type: none"> <li>• AWWT Facility Expansion</li> <li>• New STP</li> </ul> <p>Begin operations on each project after successful SSR completion</p>	<p>Submit monthly NPDES Discharge Monitoring Report to Ohio EPA</p> <p>Submit Restoration Area Verification Sampling Report (groundwater remedial footprint) to Agencies by 3/5/98</p> <p>Submit Integrated Environmental Monitoring Plan Quarterly Report to Agencies by 3/30/98</p> <p>Commence AWWT Facility Expansion operations by 4/30/98</p>
<p>Complete construction of South Field Extraction/South Plume Optimization System/Injection Demonstration System</p>	

# OU5 -- SOIL CHARACTERIZATION & EXCAVATION PROJECT (SCEP)

FEBRUARY 1998	
Major Work Activities	Enforceable Milestones
<p><b><i>Paddy's Run Embankment Stabilization Project</i></b></p> <ul style="list-style-type: none"> <li>Completed field activities for Phase II embankment stabilization; only minor checklist items remain to be completed prior to demobilization</li> <li>Completed upstream bioengineering control</li> </ul>	<p>Submitted Area 2 Phase I (Southern Waste Units) Final Design/Certified for Construction Excavation Package design drawings 12/17/97, meeting actual milestone date of 2/16/98</p>
<p><b><i>Area 2 Phase I (Southern Waste Units)</i></b></p> <ul style="list-style-type: none"> <li>Continued field implementation of Site Preparation activities; included completion of high density polyethylene infiltration barriers within retention basins</li> <li>Continued procurement process for OSDF Phase II/Southern Waste Units excavation contract; to be performed in conjunction with On-Site Disposal Facility Project</li> </ul>	
<p><b><i>Natural Resource Restoration</i></b></p> <ul style="list-style-type: none"> <li>Received U.S. EPA comments on Draft Preliminary Wetland Mitigation Assessment</li> </ul>	
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<p><b><i>Paddy's Run Embankment Stabilization Project</i></b></p> <ul style="list-style-type: none"> <li>Complete demobilization activities</li> </ul>	<p><b>NOTE: These work plans are part of the Supplemental Environmental Projects:</b></p> <p>Submit Revised Work Plan for Ecological Research Projects by 3/24/98</p> <p>Submit Revised Work Plan for On-Property Public Access Habitat Area by 4/13/98</p>
<p><b><i>Area 2 Phase I (Southern Waste Units)</i></b></p> <ul style="list-style-type: none"> <li>Continue Site Preparation activities including installation of high density polyethylene piping &amp; installation of trailer facilities</li> <li>Submit Consent Package for OSDF Phase II/Southern Waste Units excavation contract to DOE-FEMP</li> </ul>	
<p><b><i>Area 1 Phase I (OSDF Footprint)</i></b></p> <ul style="list-style-type: none"> <li>Perform additional Waste Acceptance Criteria attainment sampling of West Soil Stockpile</li> </ul>	
<p><b><i>Natural Resource Restoration</i></b></p> <ul style="list-style-type: none"> <li>Submit Draft Work Plan for Aesthetic Barrier Project</li> <li>Revise Proposals/Work Plans for projects under auspices of Operable Unit 4 Dispute Resolution</li> </ul>	

# WASTE MANAGEMENT/NUCLEAR MATERIALS DISPOSITION PROJECTS

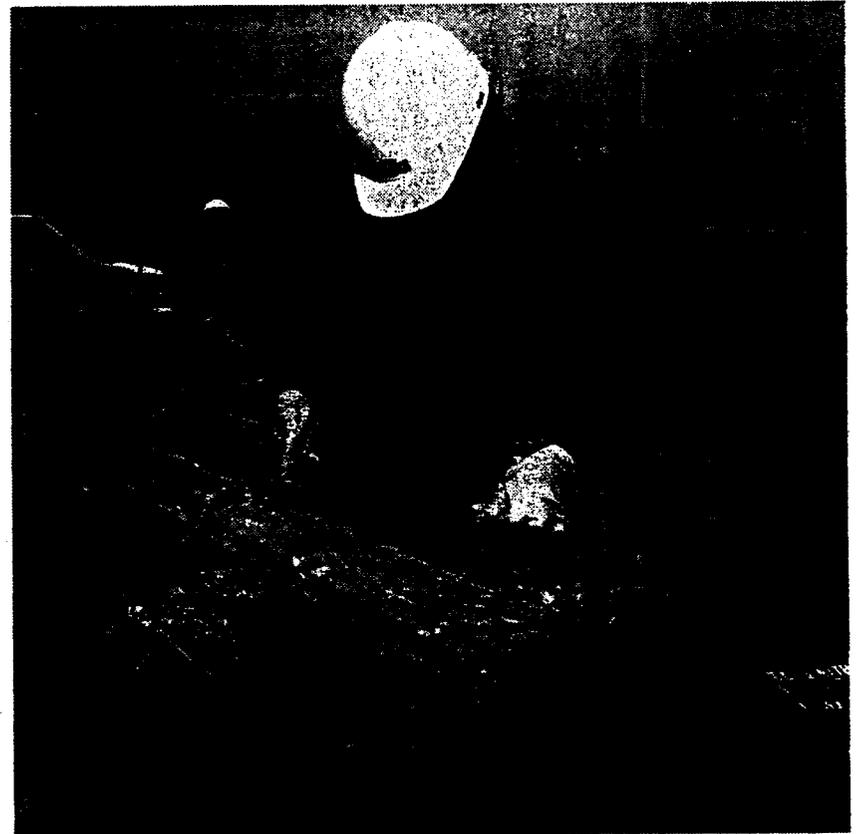
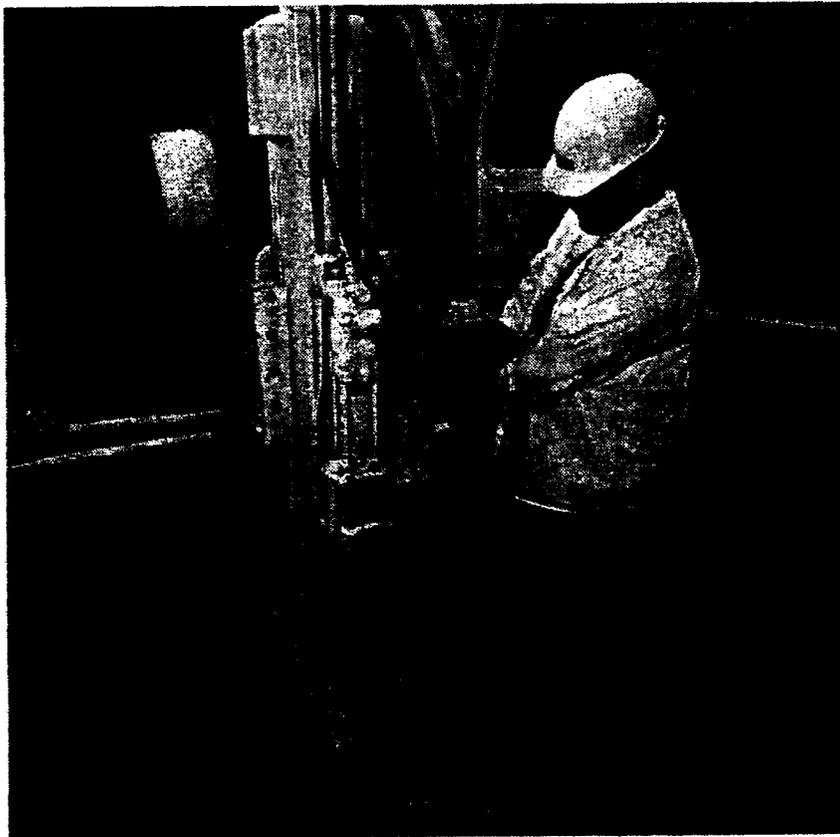
February 1998	
Major Work Activities	Enforceable Milestones
<i>Mixed Waste Projects</i>	
<ul style="list-style-type: none"> <li>• Neutralization/Precipitation/Deactivation/Stabilization (NPDS) Project               <ul style="list-style-type: none"> <li>- Treated 47 drums in February</li> <li>- Treated 724 drums as of 2/24/98</li> </ul> </li> <li>• Liquid Mixed Waste Project               <ul style="list-style-type: none"> <li>- Received sampling results for Batch #8 (newly generated &amp; recharacterized low level waste); proceeded with characterization</li> <li>- Continued ongoing evaluation of newly generated waste streams for bulking into Batches #9 &amp; #10</li> </ul> </li> </ul>	None
<ul style="list-style-type: none"> <li>• Thorium Legacy Waste Stabilization Project               <ul style="list-style-type: none"> <li>- Continued legacy waste inventory characterization/profiling</li> <li>- Received subcontractor's final Phase I documentation</li> </ul> </li> <li>• RCI Solvent Extraction Project               <ul style="list-style-type: none"> <li>- Final equipment decontamination plan submitted</li> </ul> </li> <li>• Organic Treatment Project               <ul style="list-style-type: none"> <li>- Issued Commerce Business Daily announcement 2/9/98 to seek potential bidders for treatment of tri-mixed wastes (these wastes formerly under auspices of RCI Solvent Extraction Project)</li> </ul> </li> </ul>	
<i>Nuclear Materials Disposition Projects</i>	
<ul style="list-style-type: none"> <li>• T-Hopper Project               <ul style="list-style-type: none"> <li>- Began operations 2/17/98</li> <li>- Processed 11 drums of uranium oxide</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Nuclear Materials Disposition Operations               <ul style="list-style-type: none"> <li>- Continued packaging/shipping of metal in support of contract for sale of low enriched materials</li> <li>- Shipped 15 truckloads low enriched metal</li> </ul> </li> </ul>
60-DAY LOOK AHEAD	
Anticipated Work Activities	Enforceable Milestones
<i>Mixed Waste Projects</i>	
<ul style="list-style-type: none"> <li>• NPDS Project               <ul style="list-style-type: none"> <li>- Evaluate contents of storage tank in Plant 6 (contains approximately 2,000 gallons sodium hydroxide/sodium sulfide mixture) for addition to project; consider extension of contract to treat 500 additional drums</li> </ul> </li> <li>• Liquid Mixed Waste Project               <ul style="list-style-type: none"> <li>- Shipments to Toxic Substances Control Act Incinerator on hold pending resolution of disposal issues between Oak Ridge &amp; Nevada Test Site</li> </ul> </li> </ul>	None
<ul style="list-style-type: none"> <li>• Thorium Legacy Waste Stabilization Project               <ul style="list-style-type: none"> <li>- Stage low level waste repackaging efforts in Building 64, to support eventual shipment to Nevada Test Site</li> </ul> </li> <li>• RCI Solvent Extraction Project               <ul style="list-style-type: none"> <li>- Complete decontamination/demobilization by 4/30/98</li> </ul> </li> <li>• Organic Treatment Project               <ul style="list-style-type: none"> <li>- Letters of interest from qualified vendors due 4/6/98</li> <li>- Issue Request for Proposal to qualified vendors in 4/98</li> </ul> </li> <li>• Hazardous Waste/Recycling Project               <ul style="list-style-type: none"> <li>- Ship next Lab Pack in 3/98</li> </ul> </li> </ul>	
<i>Nuclear Materials Disposition Projects</i>	
<ul style="list-style-type: none"> <li>• T-Hopper Project               <ul style="list-style-type: none"> <li>- Continue repackaging operations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Nuclear Materials Disposition Operations               <ul style="list-style-type: none"> <li>- Complete packaging/preparation of all metal shipments in support of low enriched uranium contract</li> <li>- Restart packaging of &lt;1.0% uranium tetra fluoride</li> </ul> </li> </ul>

# ENVIRONMENTAL MONITORING

- **Support projects through sample collection**
- **Implement Integrated Environmental Monitoring Program**

# GEOPROBE

## OCTOBER 1996/NOVEMBER 1997



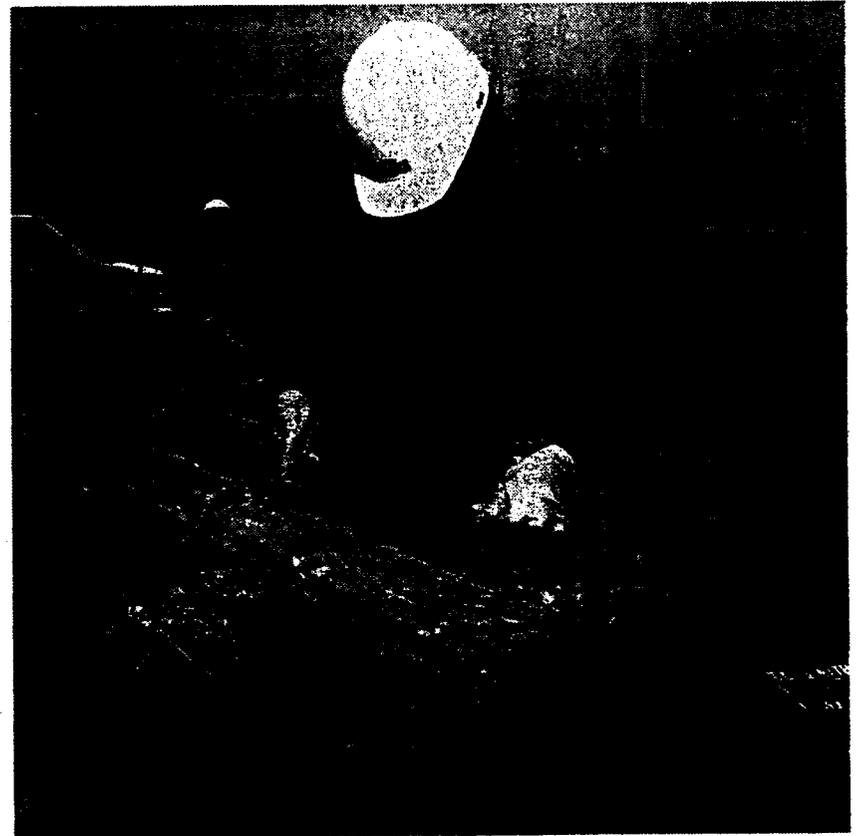
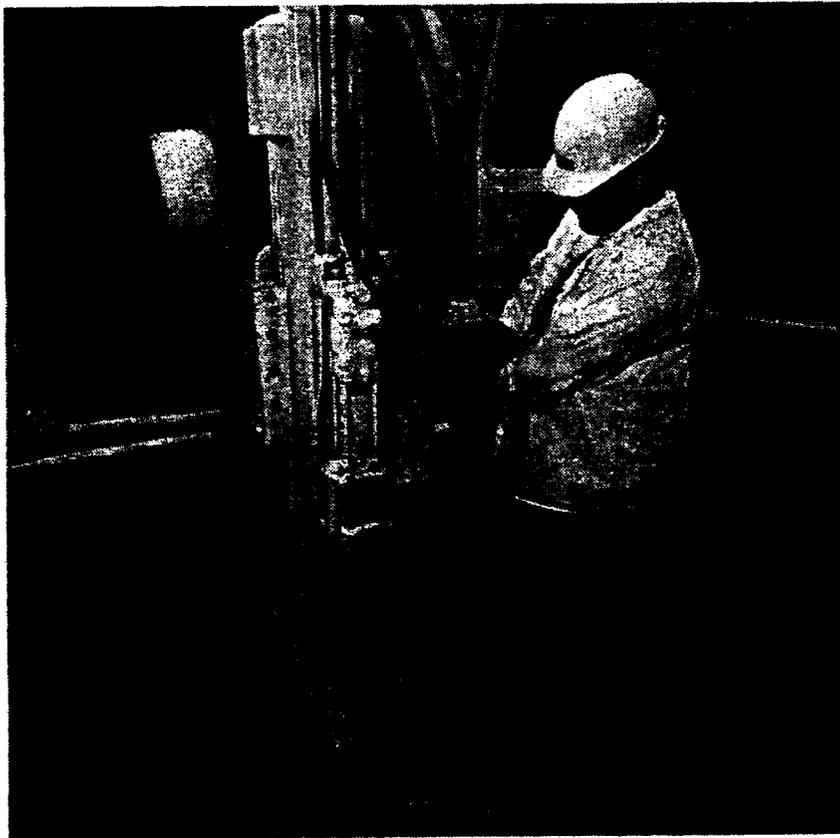
# GROUNDWATER SAMPLING FEBRUARY 1998



45

# GEOPROBE

## OCTOBER 1996/NOVEMBER 1997



# GROUNDWATER SAMPLING FEBRUARY 1998



45

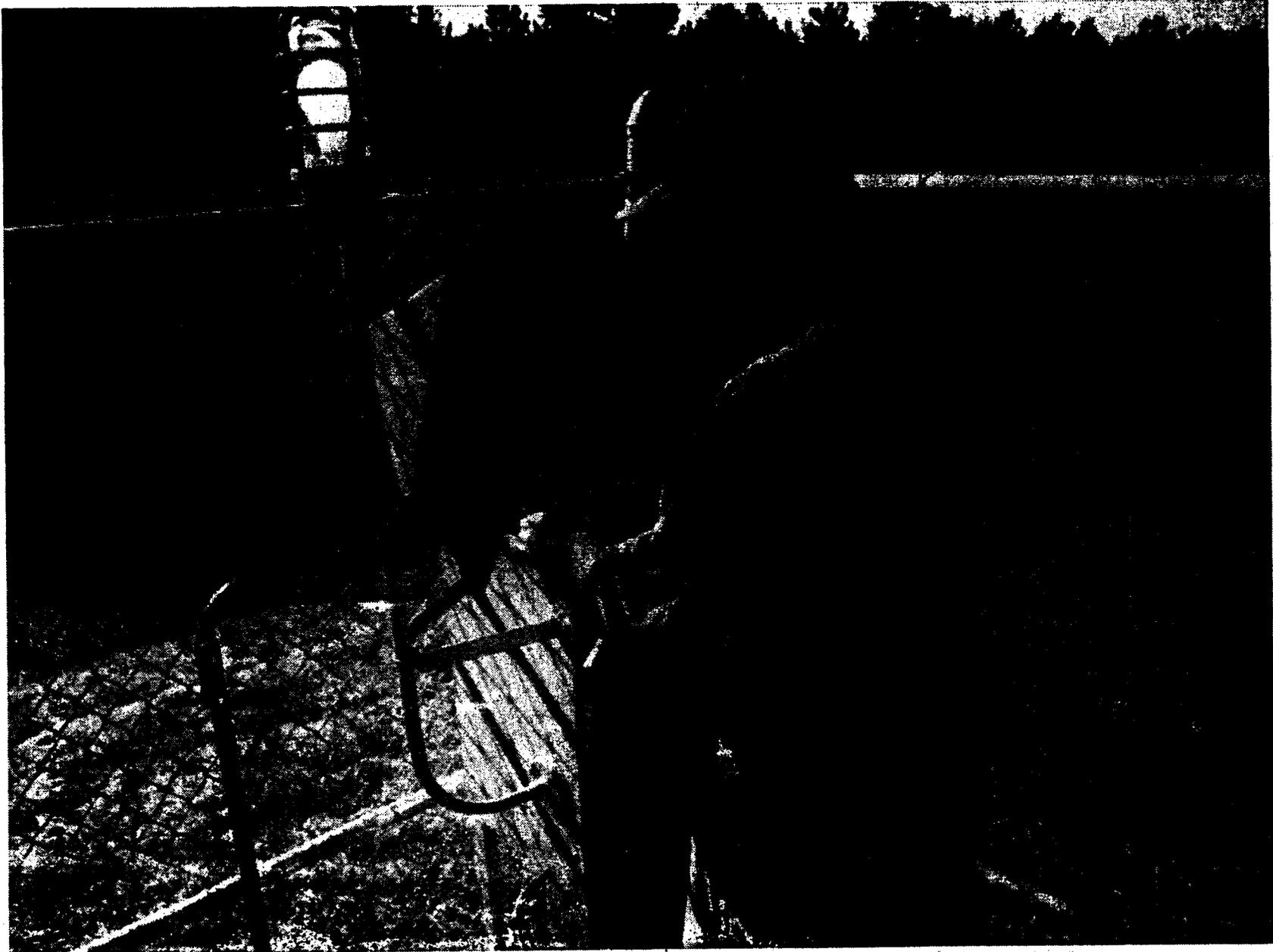
# **INTEGRATED ENVIRONMENTAL MONITORING PROGRAM**

- **Incorporates all regulatory requirements for monitoring, reporting and groundwater remedy performance tracking**
- **Reporting link for process control monitoring**
- **“Living Document”**
  - **Reviewed annually for appropriate scope**
  - **Updated every two years**

# **INTEGRATED ENVIRONMENTAL MONITORING PROGRAM**

- **Emphasis on monitoring primary pathways**
  - **Air**
  - **Groundwater**
  - **Surface water and treated effluent**
- **Emphasis on monitoring at the facility property boundary**
- **Continued Sampling of two secondary pathways**
  - **Sediment**
  - **Produce**

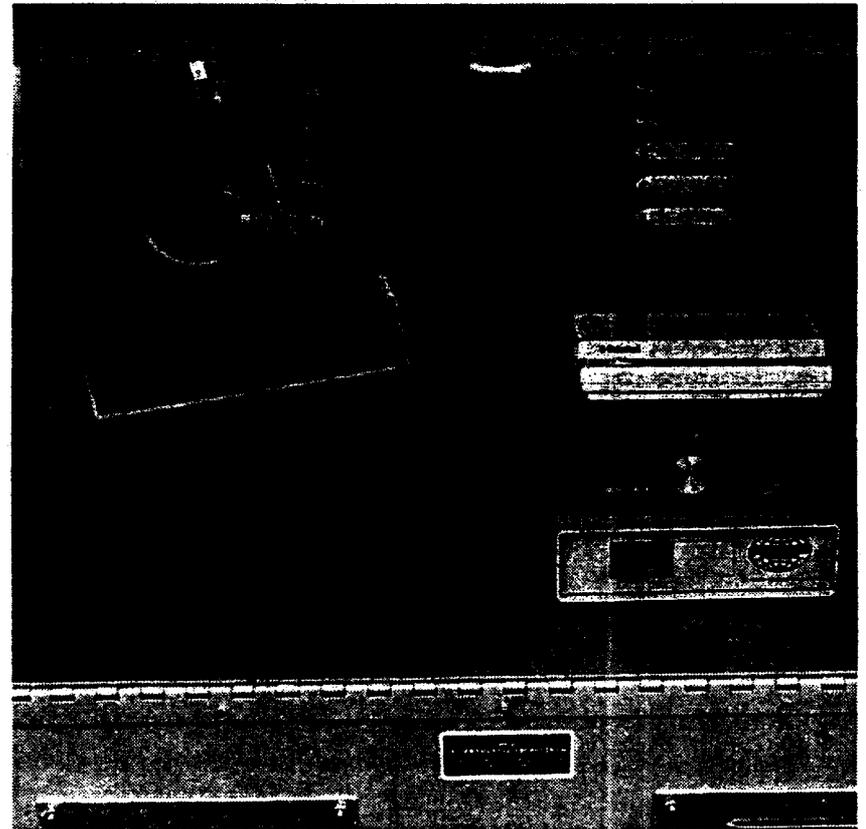
# AIR MONITORING OCTOBER 1997



27

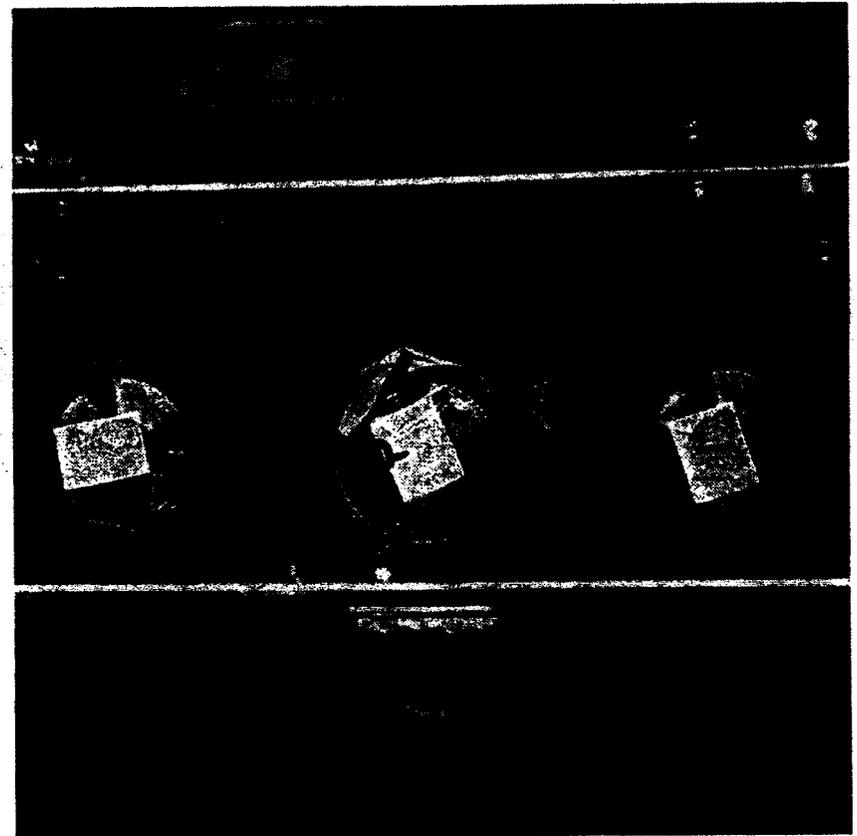
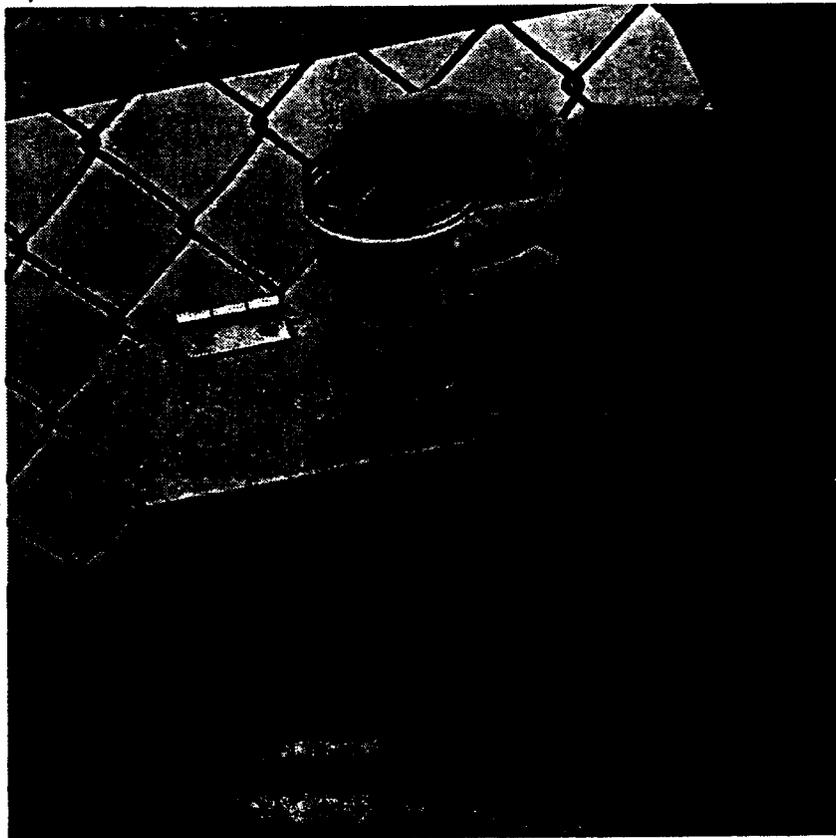
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# CONTINUOUS RADON SAMPLING FEBRUARY 1998



49

# LONG-TERM RADON MONITORING FEBRUARY 1998



50

# DIRECT RADIATION MONITORING FEBRUARY 1998



51

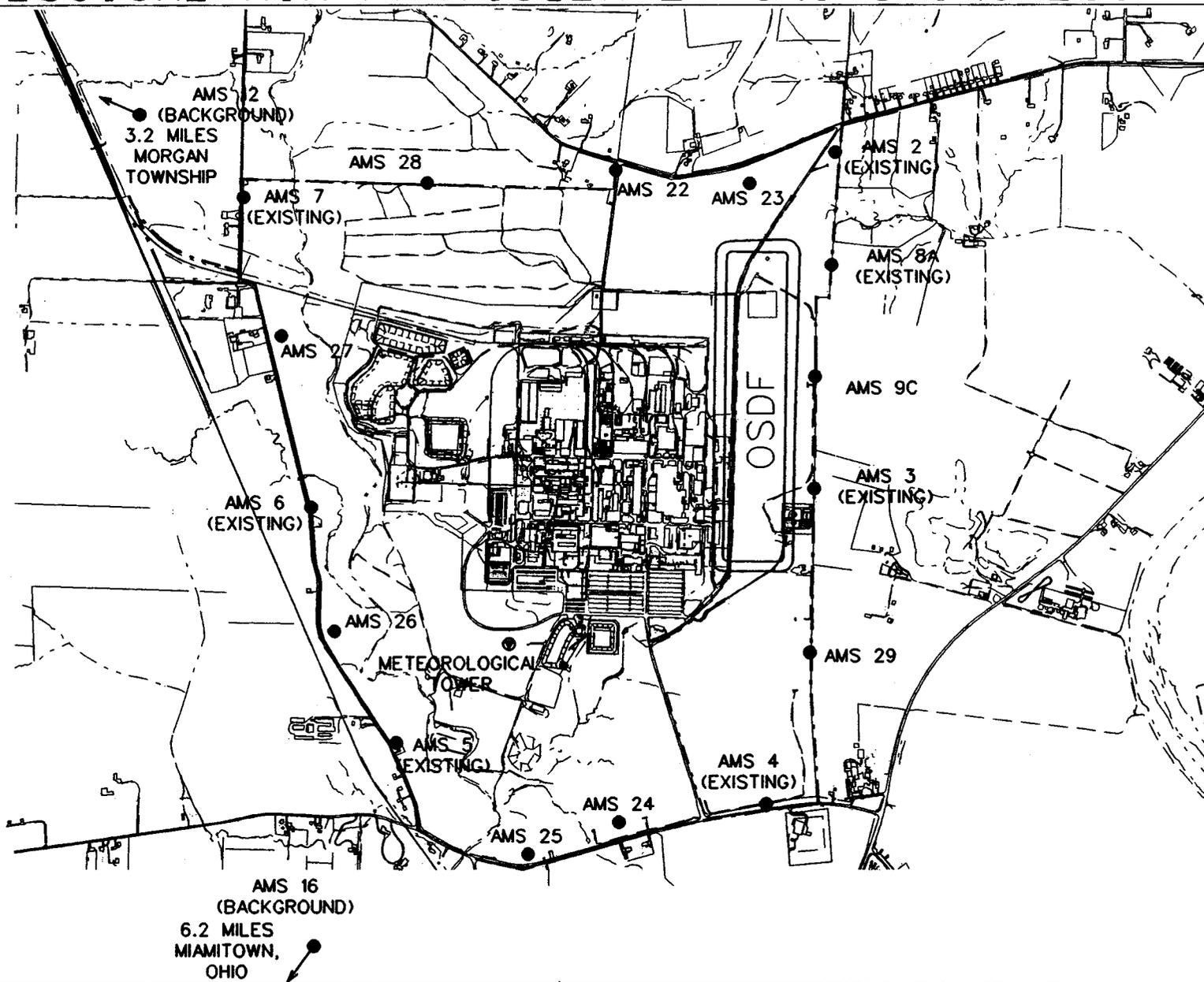
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# **INTEGRATED ENVIRONMENTAL MONITORING PROGRAM**

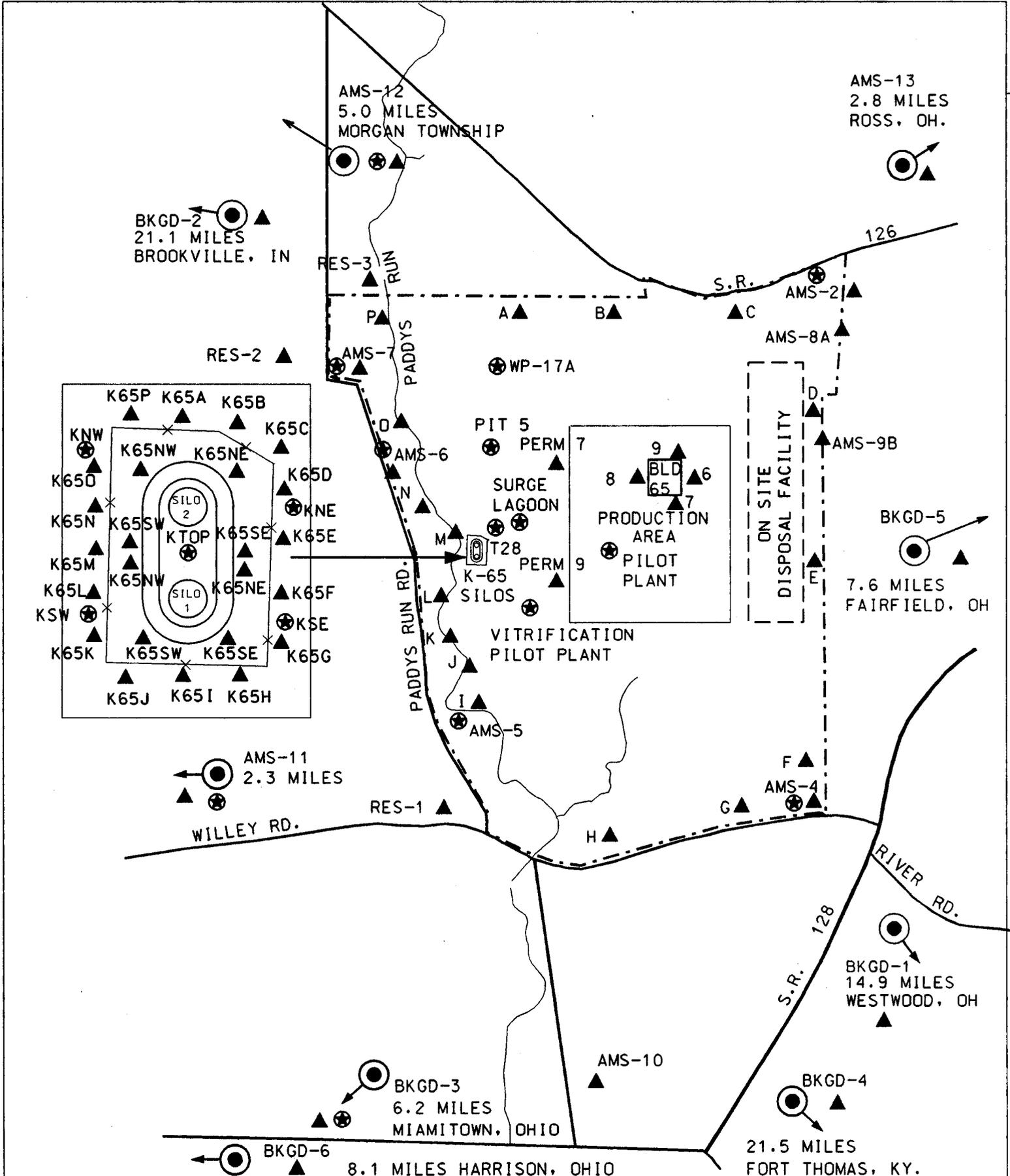
## **Reporting**

- **Annual IEMP Report**
  - Submitted June 1 each year
  - Replaces Annual Site Environmental Report
  - Contains data interpretation
- **Quarterly Data Summaries**
  - Submitted March, June, September and December
  - Presentation of data with minimal interpretation

# RADIOLOGICAL AIR PARTICULATE MONITORING LOCATIONS

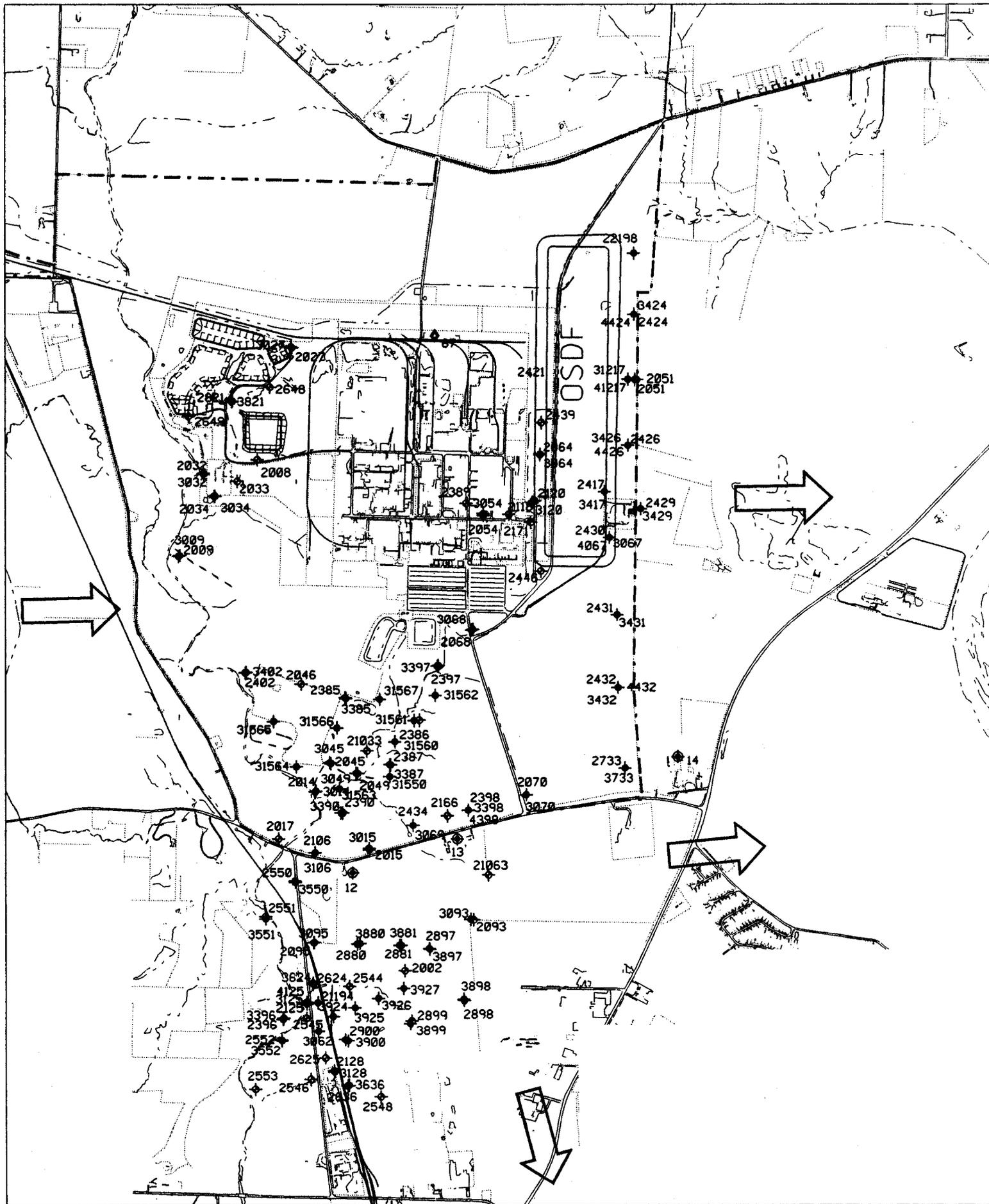


# RADON MONITORING LOCATIONS

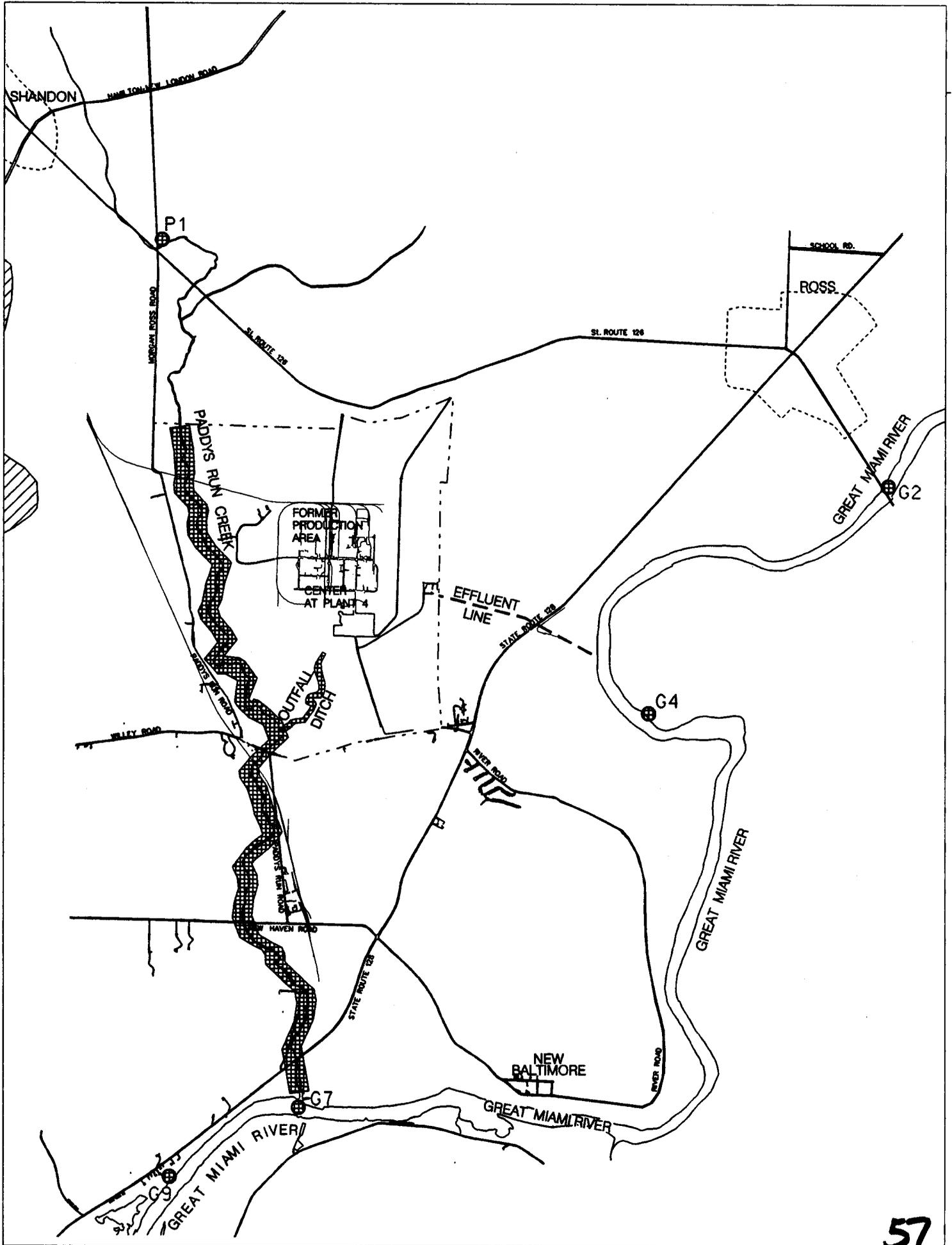




# IEMP WATER QUALITY MONITORING WELLS FOR 1997 AND 1998

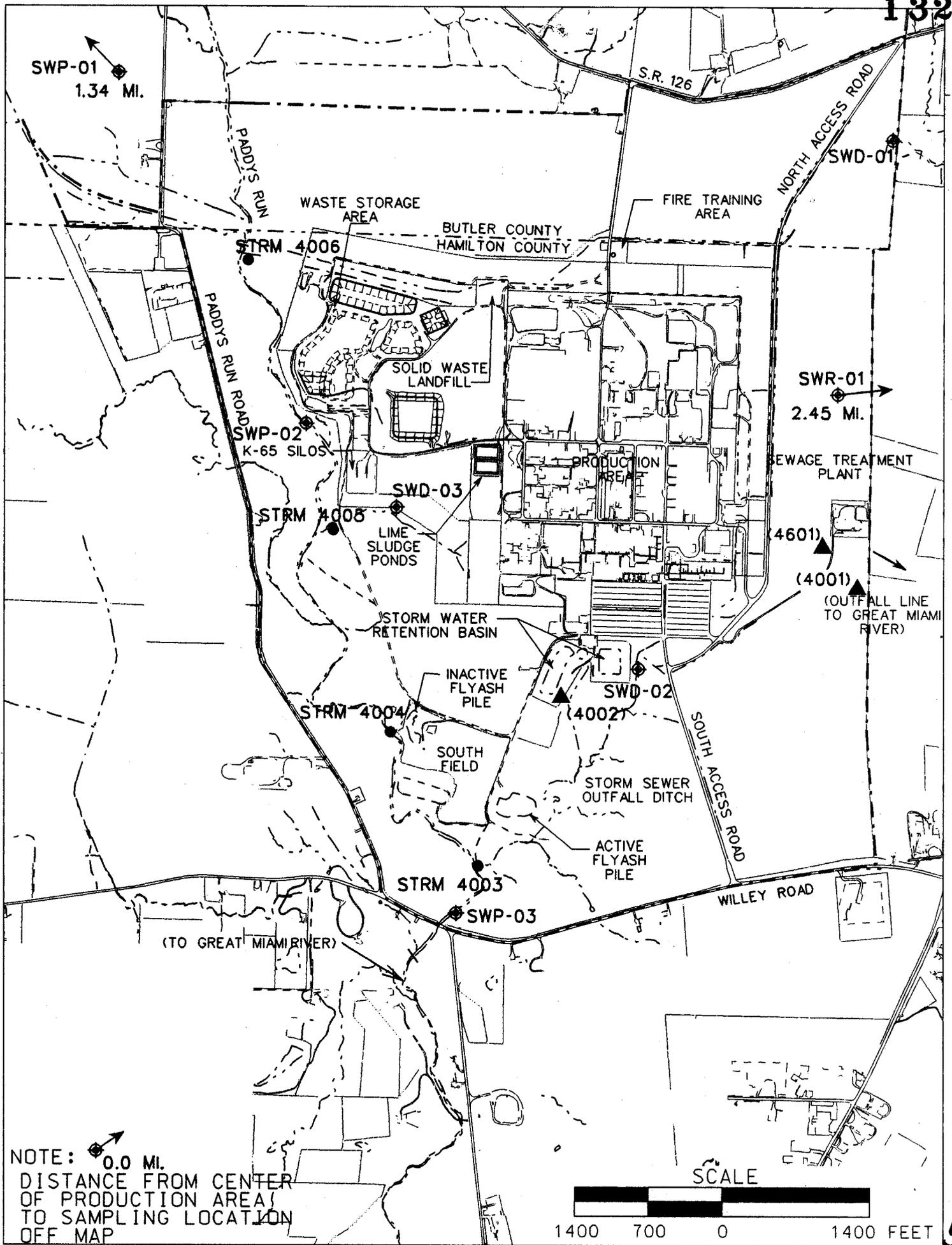


# SEDIMENT MONITORING LOCATIONS 327

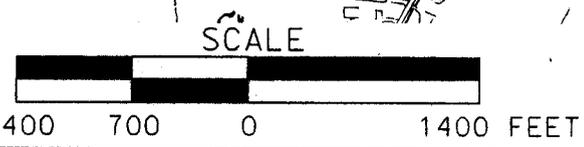


# IEMP SURFACE WATER SAMPLE LOCATIONS

1327



NOTE: 0.0 MI.  
DISTANCE FROM CENTER  
OF PRODUCTION AREA  
TO SAMPLING LOCATION  
OFF MAP



# PRODUCE MONITORING LOCATIONS

1327

