

# **FERNALD CLEANUP PROGRESS BRIEFING**

**April 8, 2003**

**6:30 p.m. - Opening remarks**

**Gary Stegner**

**6:35 p.m. - Project updates**

- Silos**
- Waste Pits**
- Decontamination & Demolition**
- Soil & Disposal Facility**
- Aquifer & Wastewater**
- Waste Management**

**Nina Akgunduz**

**Dave Lojek**

**Melvin Boyd**

**Rob Janke**

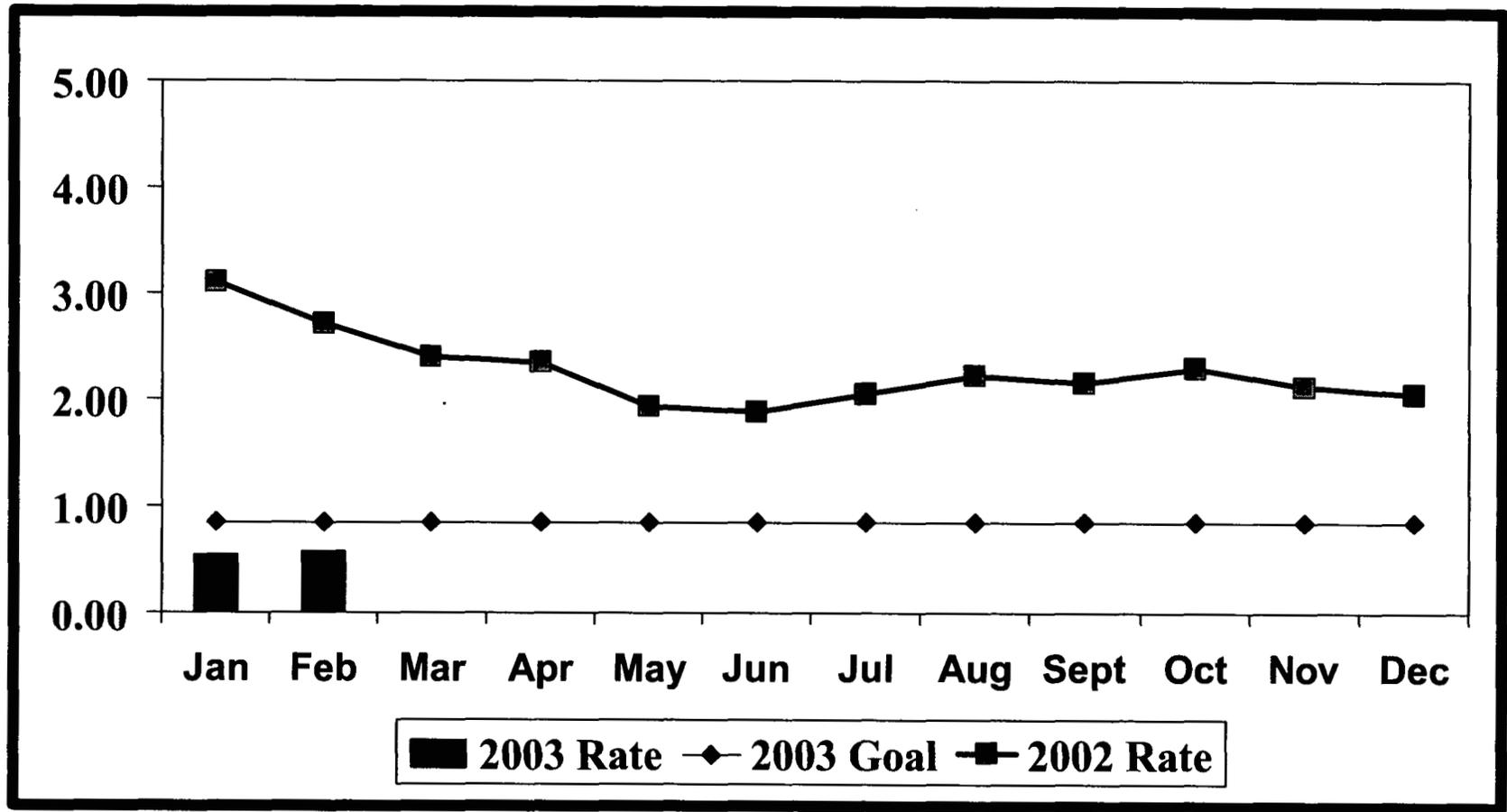
**Rob Janke**

**Debbie White**

**Question and answer session**

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

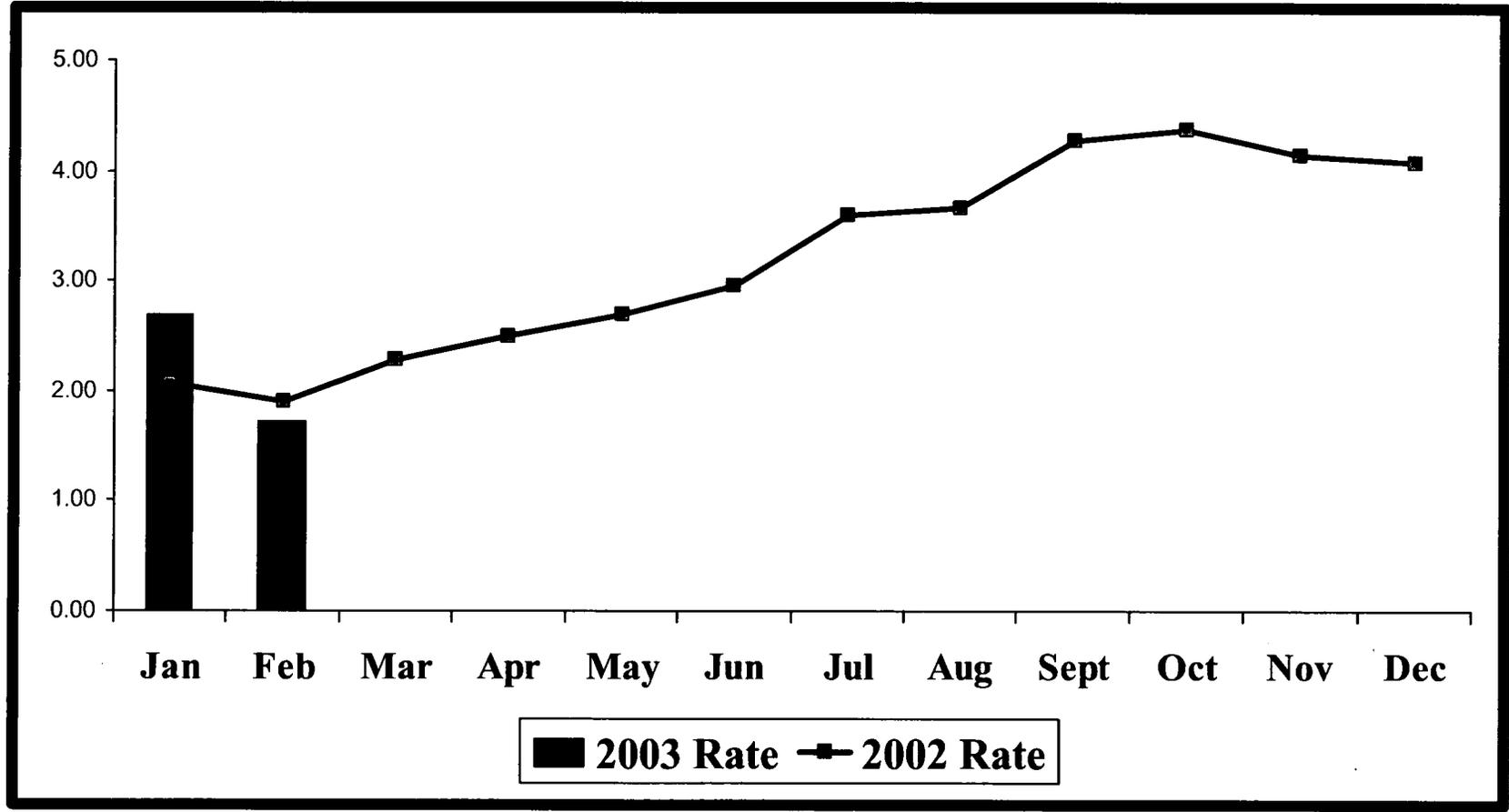
# 2002 - 2003 OSHA RECORDABLE INCIDENCE RATE



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# 2002-2003 FIRST AID INCIDENCE RATE



Graphics 7802.1B

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# **SILOS PROJECT: ACCELERATED WASTE RETRIEVAL (AWR)**

*Mission – Retrieve Silos 1 and 2 material and pump to the Transfer Tank Area*

## **Document status - Remedial Design Package**

- **September 5, 2002 – submitted to EPA**
- **October 4, 2002 – received comments**
- **February 28, 2003 – submitted revised package**

## **Construction**

- **April 2003 - Transfer Tank Area (TTA) deck pour**
- **April 2003 – Pressure control valve installation**
- **May-June 2003 - dome cap removal**
- **July-August 2003 - Riser installation**
- **June-July 2003 - Silos 1 and 2 bridge**
- **Aug.-Oct. 2003 - Installation of sluicing and pumping modules**
- **Aug.-Sept. 2003 - Test stand installation for training**

## **Operations**

- **December 7, 2003 – RCS Phase I Hot Test completed**
- **May 2003 – RCS Phase I continuous operation**

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# TTA DECK CONCRETE POUR



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Graphics 7802.7

Photo taken March 2003

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# SILOS 1 AND 2 PROJECT

*Mission – Treat material from TTA, package, transport by truck and/or rail to NTS*

## Document status

- **Remedial Design Package**
  - **December 20, 2002 – submitted to EPA**
  - **February 20, 2003 – received comments**
  - **April 11, 2003 – submit revised package**
- **Explanation of Significant Differences (ESD)**
  - **Draft**

## Vendor design and fabrication

- **Eight agitators**
- **Clarifier**
- **Dry bulk material handling system**
- **Product mixers**
- **Bridge crane**
- **Issue RFPs for gloveboxes and conveyor system**

# **SILOS 1 AND 2 PROJECT**

## **Construction**

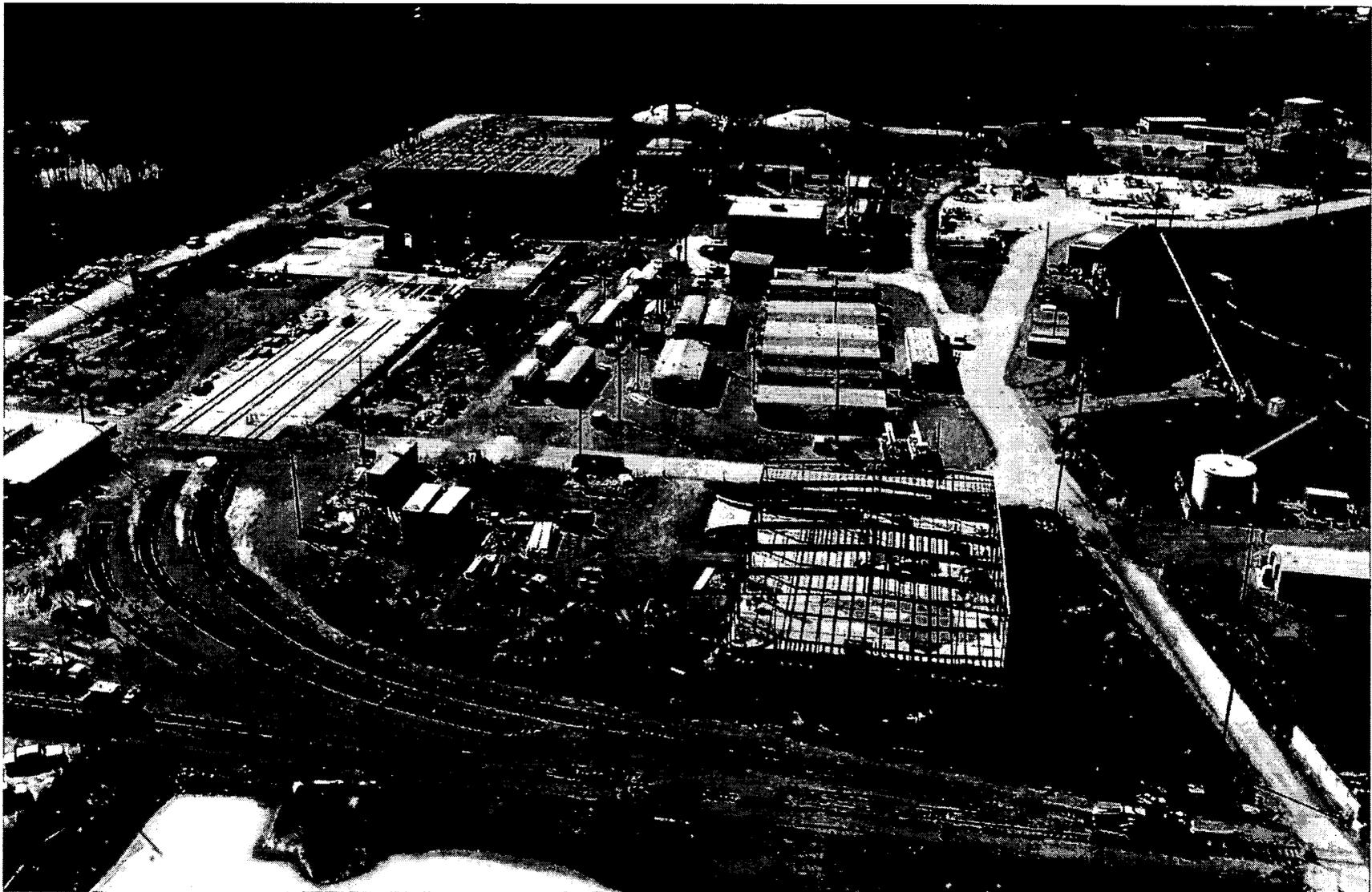
- **Treatment facility foundation**
- **Warehouse**
- **Slurry receipt tanks, feed tanks, recycle tanks**
- **Phase I rail spur**
- **Concrete shield walls**

## **Packaging, Transportation and Disposal**

- **June 2003 – Shielded railcar testing**
- **July 2003 – Container drop testing**
- **July 2003 – Functional testing of fill chute, container, and transfer car system prototype**

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# SILOS 1 AND 2 RAIL SPUR



7941-D016  
Graphics 7802.8

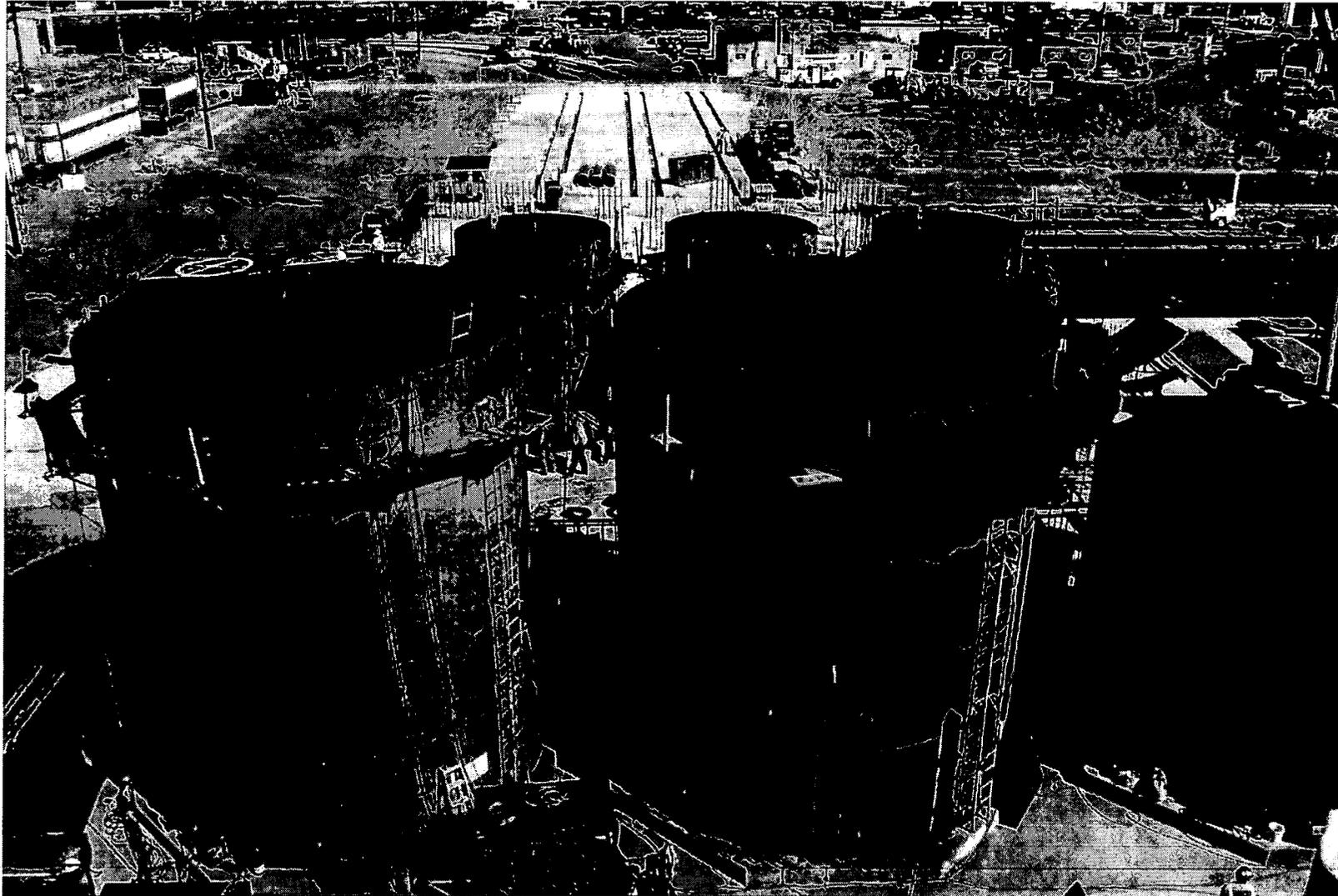
Photo taken March 2003

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# SILOS 1 AND 2 TANK ERECTION



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Graphics 7802.9

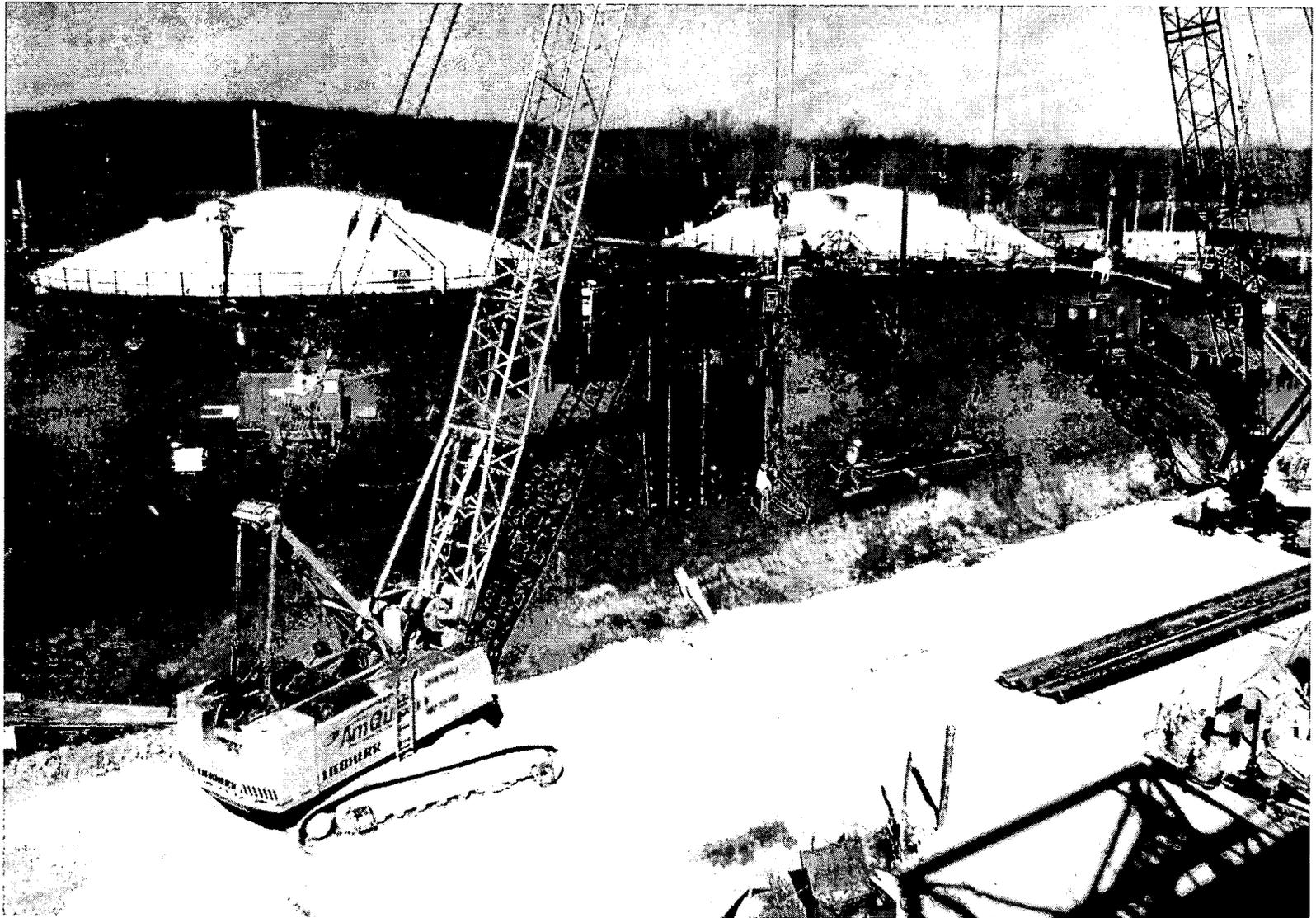
Photo taken March 2003

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# SILOS 1 AND 2 SHEET PILING



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Graphic 7802.10

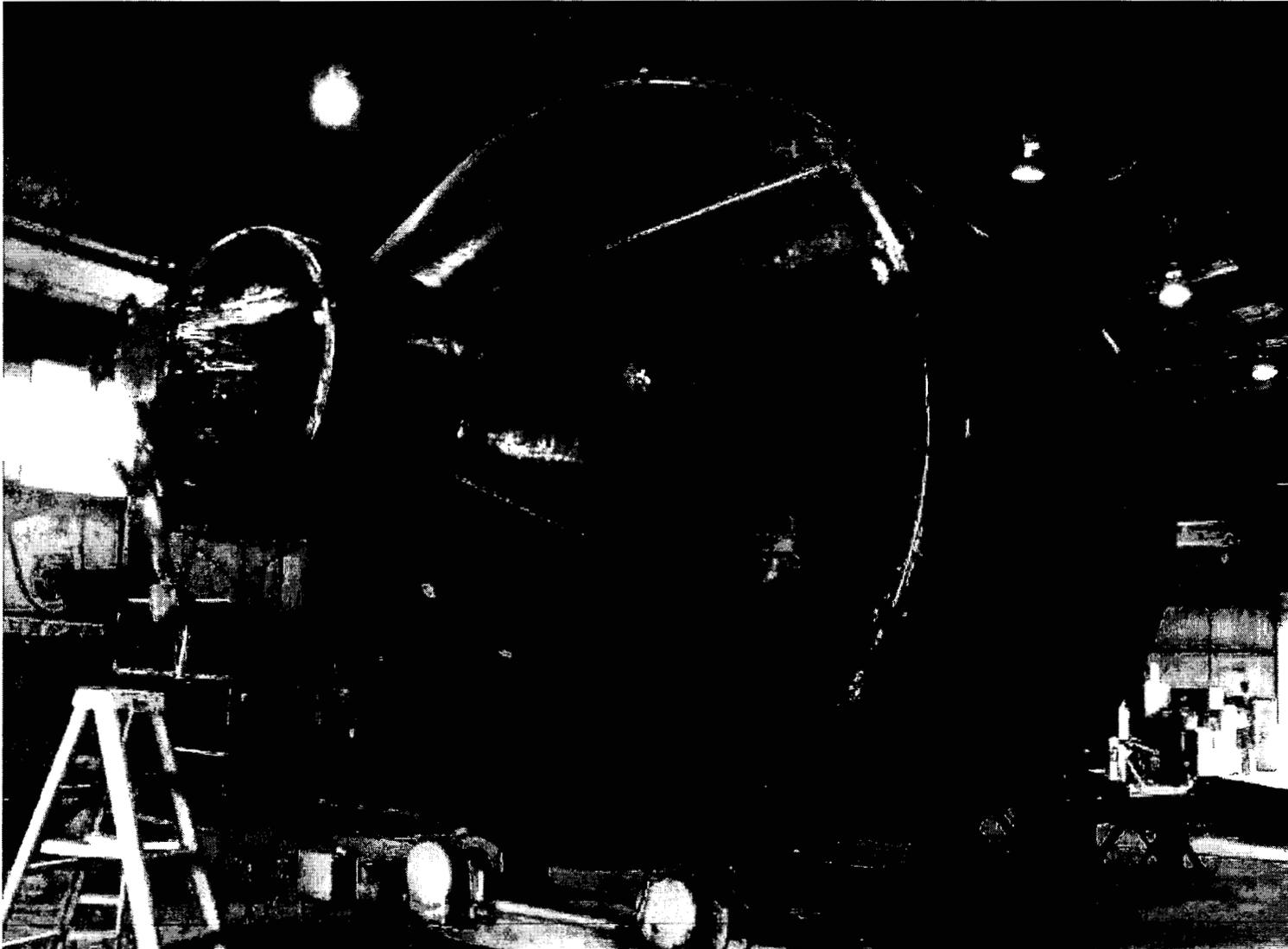
Photo taken April 2003

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# CLARIFIER TANK FABRICATION



7938-D029  
Graphic 7802.11

Photo taken March 2003  
in Owensboro, Kentucky

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## **SILO 3 PROJECT**

*Mission – Retrieve and condition Silo 3 material to reduce dispersability, package and transport by truck and/or rail to NTS*

### **Document status**

- **Draft Proposed Plan (PP)**
  - **December 16, 2002 – submitted revised PP to EPA**
  - **February 2, 2003 – received comments**
  - **March 14, 2003 – submitted revised PP with comment responses**
  - **April – May 2003 – public comment period**
  - **May 2003 – scheduled public hearing**
  
- **Draft ROD Amendment**
  - **Will develop and submit to EPA after public hearing in May**

# **SILO 3 PROJECT**

## **Vendor design and fabrication**

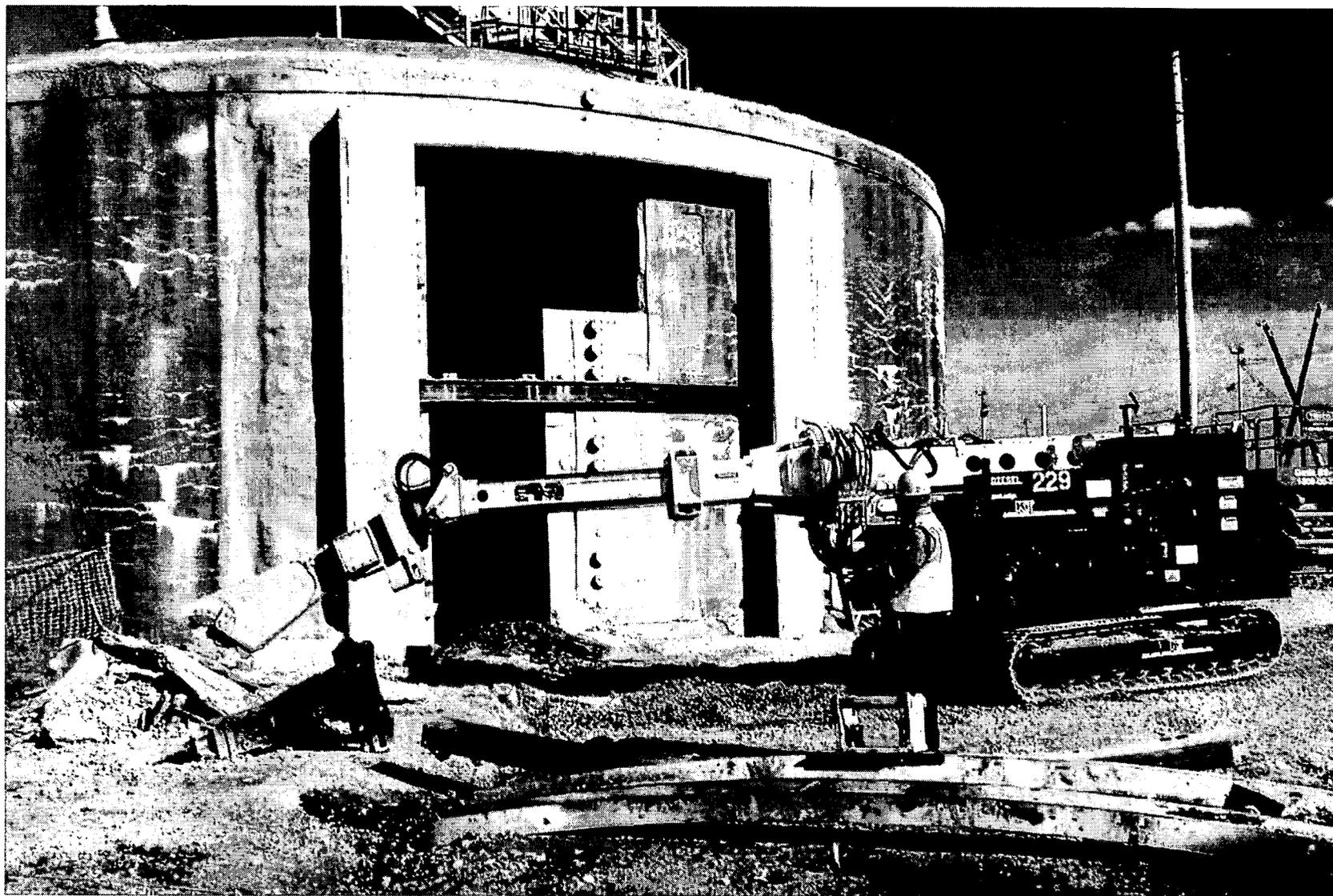
- **Excavator system**
- **Packaging system**

## **Construction**

- **March 28, 2003 – Silo 4 wall cut and excavator mock-up demonstration**
- **May 2003 – complete facility foundation**
- **May 2003 – on-site mobilization of building/architectural contractor**
- **July 2003 – on-site mobilization of mechanical and electrical contractors**

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# SILO 4 DEMONSTRATION



7815-D0201  
Graphic 7802.12

Photo taken March 2003

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# **WASTE PITS REMEDIAL ACTION PROJECT**

- **Rail transportation**
- **Waste pit excavation**
- **Dryer operations**

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# DIRECT HAUL BULKING



7913-D01  
Graphic 7802.14

Photo taken December 2002

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# NEW RAIL SPUR



6349-D1999  
Graphic 7802.16

Photo taken March 2003

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# PIT 5 EXCAVATION

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Graphic 7802.17

Photo taken January 2003

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# PIT 4 EXCAVATION



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Graphic 7802.17A

Photo taken March 2003

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# **DECONTAMINATION AND DEMOLITION**

- **Multi-complex: Plant 2, Plant 3, Plant 8 and General Sump**
  - **Completed structural demolition of well house #3 and the scale house and scale**
  - **Ongoing activities include asbestos abatement; equipment, piping and transite removal; debris size reduction; and placement of debris in rolloff boxes**
  
- **Pilot Plant**
  - **Completed structural demolition of the Pilot Plant Annex**
  - **Asbestos abatement**
  - **Process piping and equipment removal**
  
- **Laboratory Complex**
  - **Began equipment removal and asbestos abatement**

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# PLANT 2/3



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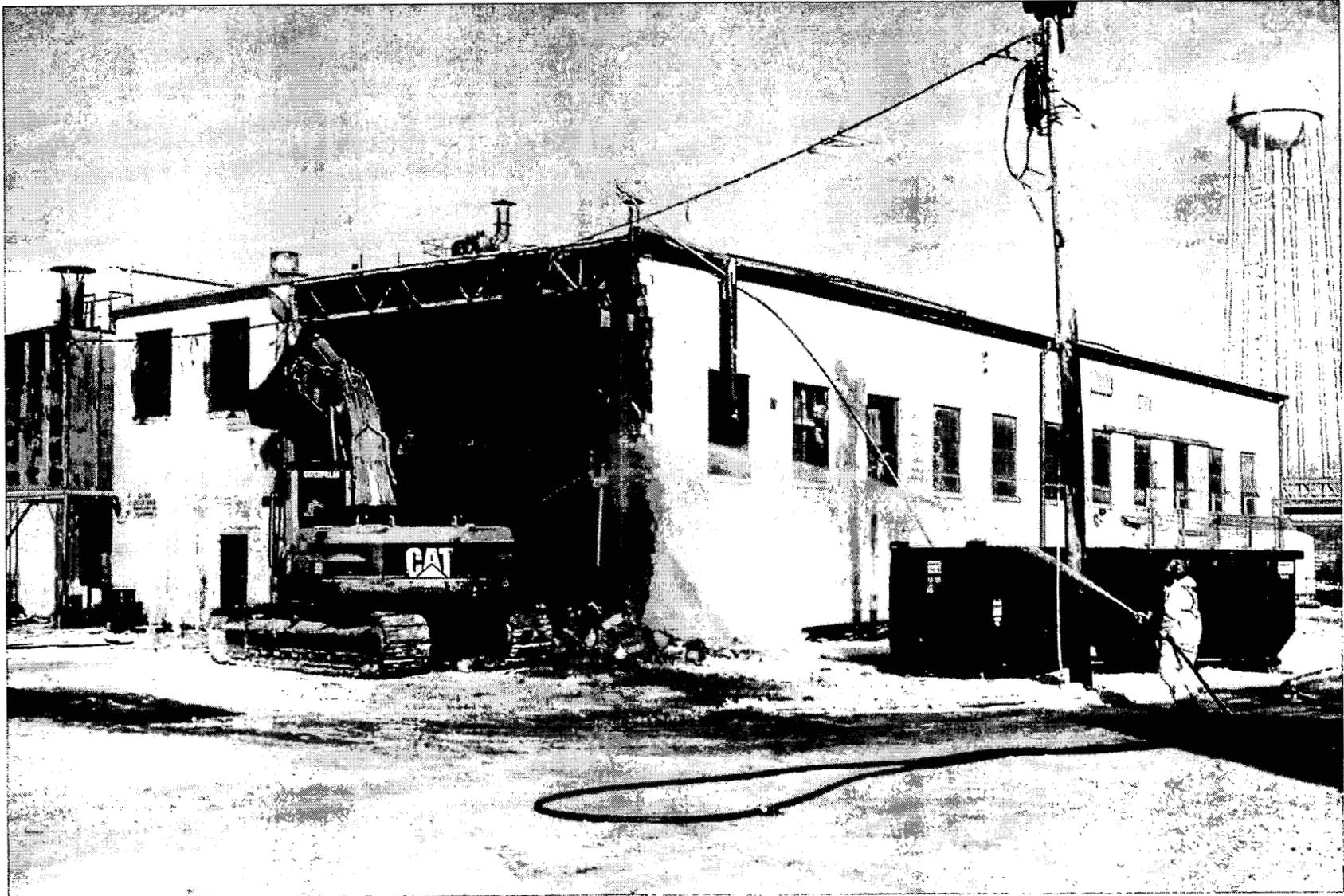
Photo taken January 2003

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# PILOT PLANT



6254-D405  
Graphic 7802.20

Photo taken January 2003

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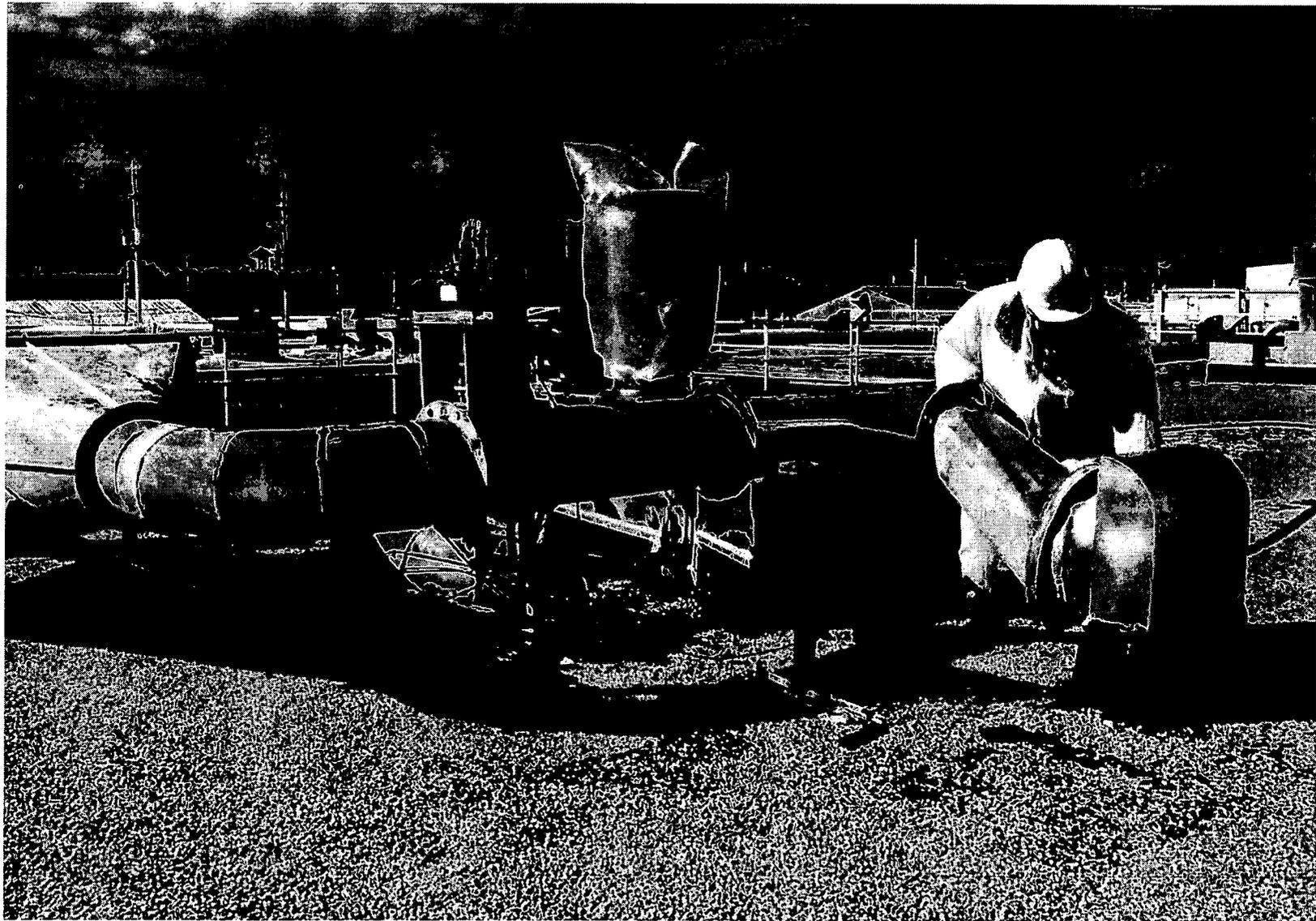
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# LAB BUILDING



7892-D031  
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Photo taken April 2003

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# **SOIL AND DISPOSAL FACILITY PROJECT**

- **Cell 2 - filled to capacity**
- **Cell 3 – 51 percent full**
- **Cell 4 – completed liner construction; 9 percent full**
- **Cell 5 – completed liner construction; 3 percent full**
- **Cell 6 – started site preparation work for liner; completed OSDF sediment basin #2**
  
- **Completed excavation:**
  - **Old laydown area south of Pilot Plant drainage ditch**
  - **Two lime sludge ponds**
  - **Fire Training Facility and old 126 entrance**

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# **SOIL AND DISPOSAL FACILITY PROJECT**

- **Continued breaking concrete floors and foundations in the southeastern quadrant of former production area**
- **Completed Area 9, Phase 1 certification**
- **Continued natural resource restoration of Southern Waste Units and northern pine area**

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# **SOIL AND DISPOSAL FACILITY PROJECT**

## **Planned Construction Activities**

### **On-Site Disposal Facility:**

- **November 2003 – Cell 2 final cover construction**
- **November 2003 – Cell 6 liner construction**
- **December 2003 – Cell 3 final cover three-foot select layer**
- **Cell 7 liner site preparation**

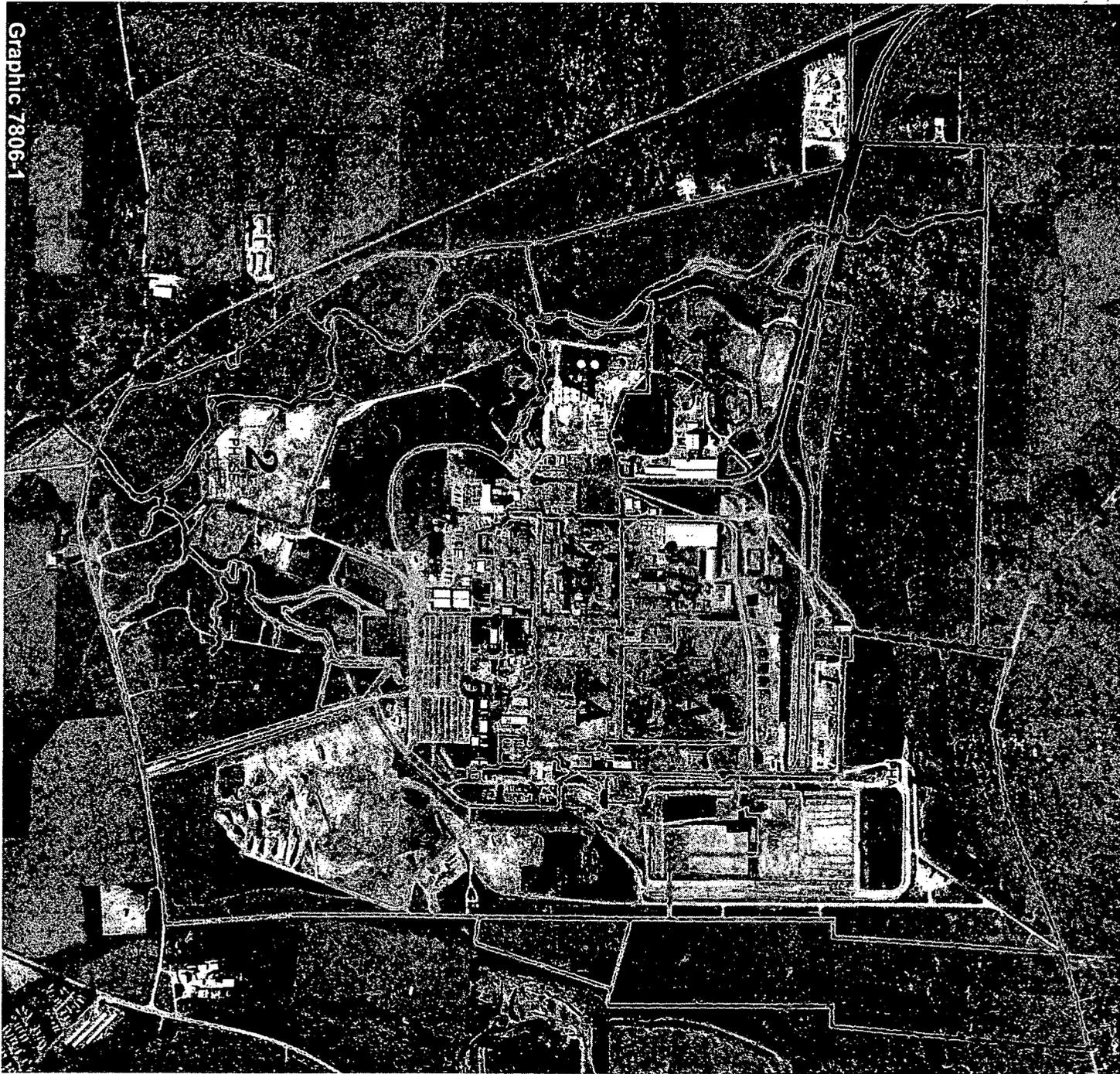
### **Soil Excavation and Certification:**

- **Area 2, Phase II radium hotspot**
- **Areas 3A and 4A soil excavation**
- **Areas 3B, 4A and 4B concrete breaking**
- **Areas 3A and 4A pre-certification and certification**

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# SOIL AREAS AND PHASES



Graphic 7806-1

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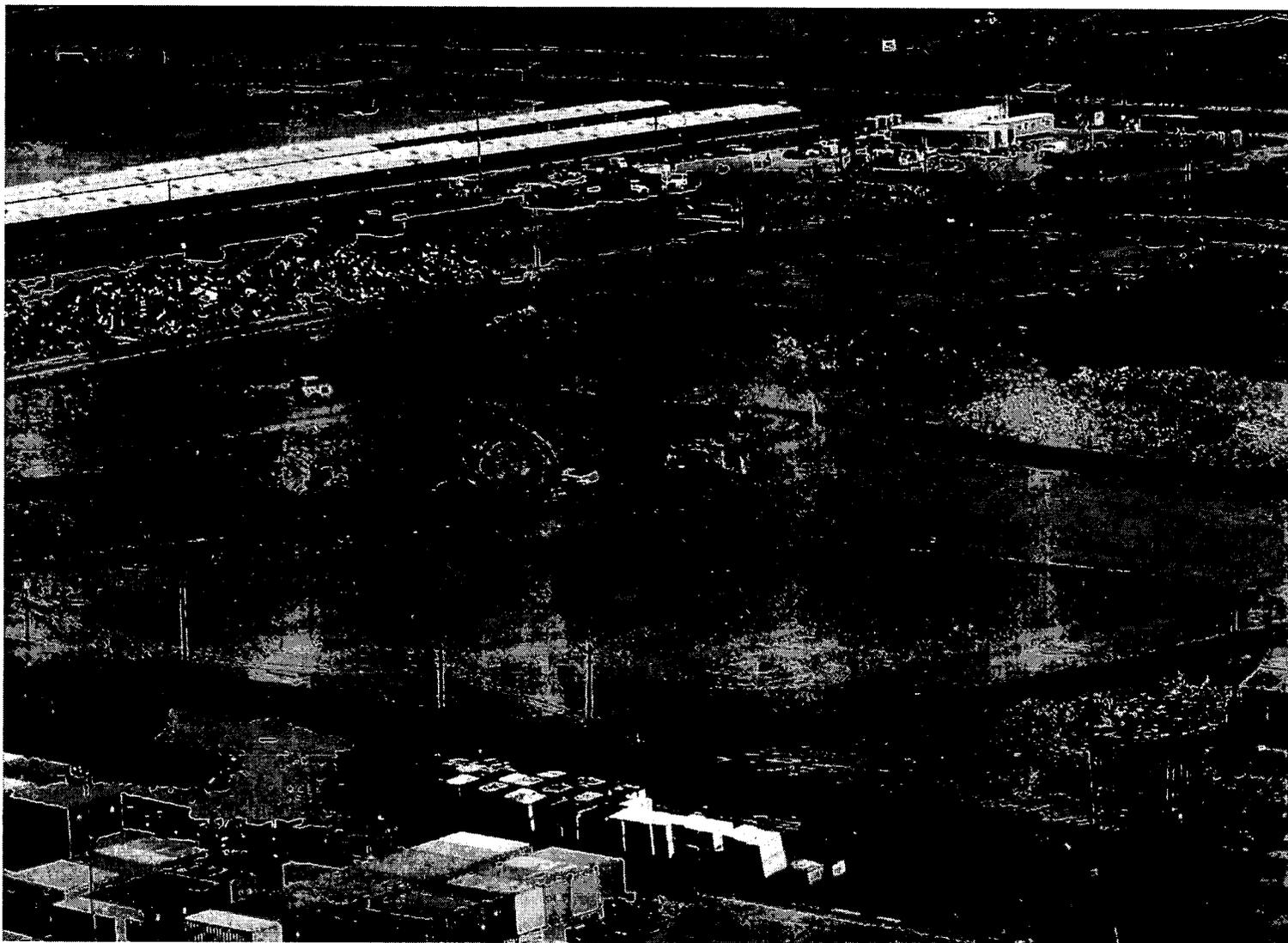
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# FORMER PRODUCTION AREA EXCAVATION



7856-D049  
Graphic 7802.26

Photo taken September 2002

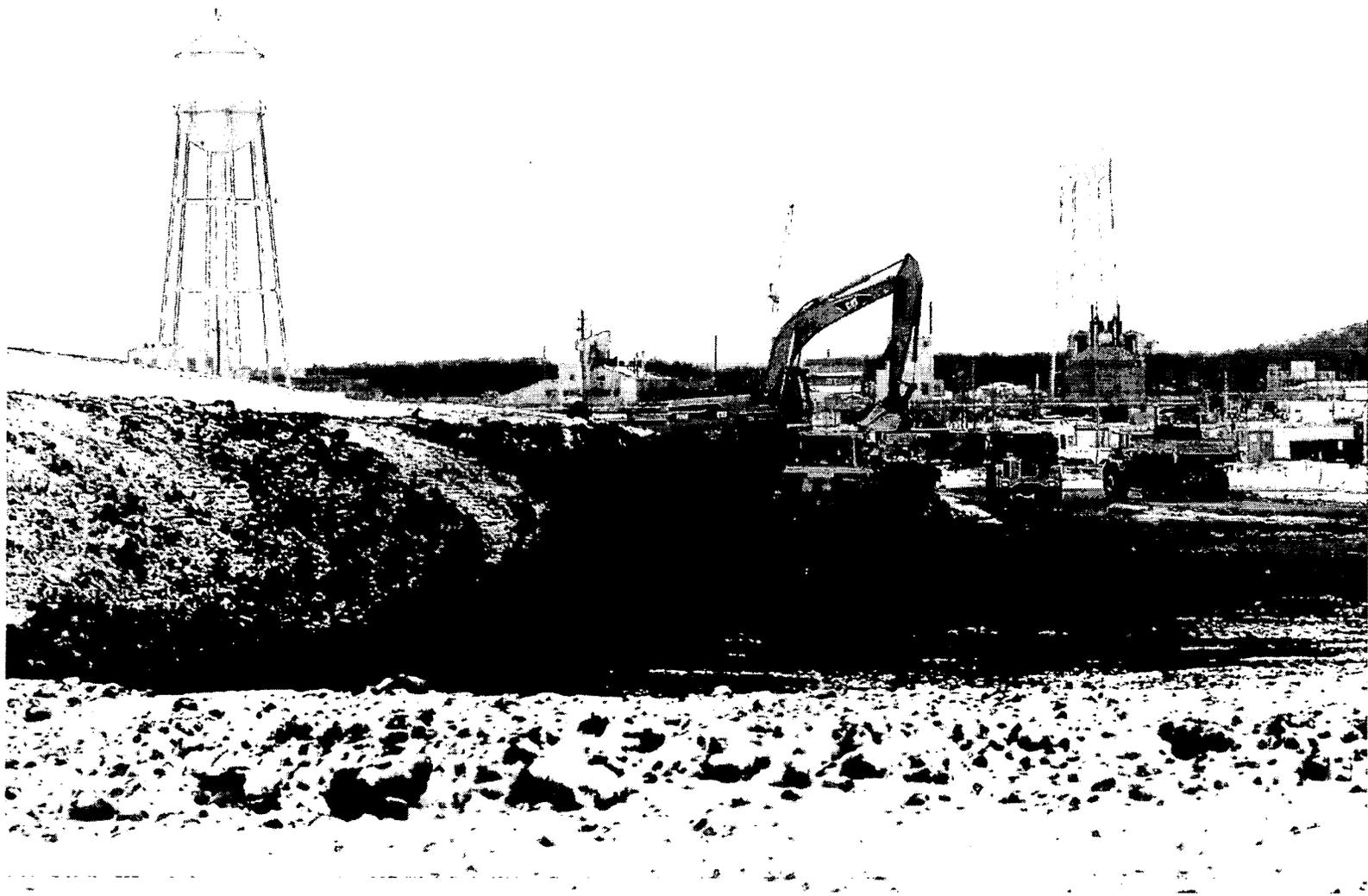
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# WINTER SOIL ACTIVITIES



6319-D3934  
Graphic 7802.27

Photo taken January 2003

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# OLD ENTRANCE OFF ROUTE 126



7939-D02  
Graphic 7802.28

Photo taken March 2003

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# FIRE TRAINING FACILITY



5932-D014  
Graphic 7802.29

Photo taken February 2003

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# NATURAL RESOURCE RESTORATION



7800-D0171  
Graphic 7802.30

Photo taken December 2002

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# **AQUIFER RESTORATION/ WASTEWATER PROJECT**

- **Completed South Field Phase II module well installation**
  - **4 extraction wells, 1 injection well, 26 monitoring wells**
  - **Extraction and injection wells come on line this summer after crews complete infrastructure construction**
- **Relocated re-injection wells 8a and 9a and constructed new re-injection well 10a**
  - **Completed startup testing**
- **Geoprobed south plume area south of Willey Road**
- **Installed 2 groundwater monitoring wells at OSDF Cell 6**

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# **AQUIFER RESTORATION/ WASTEWATER PROJECT**

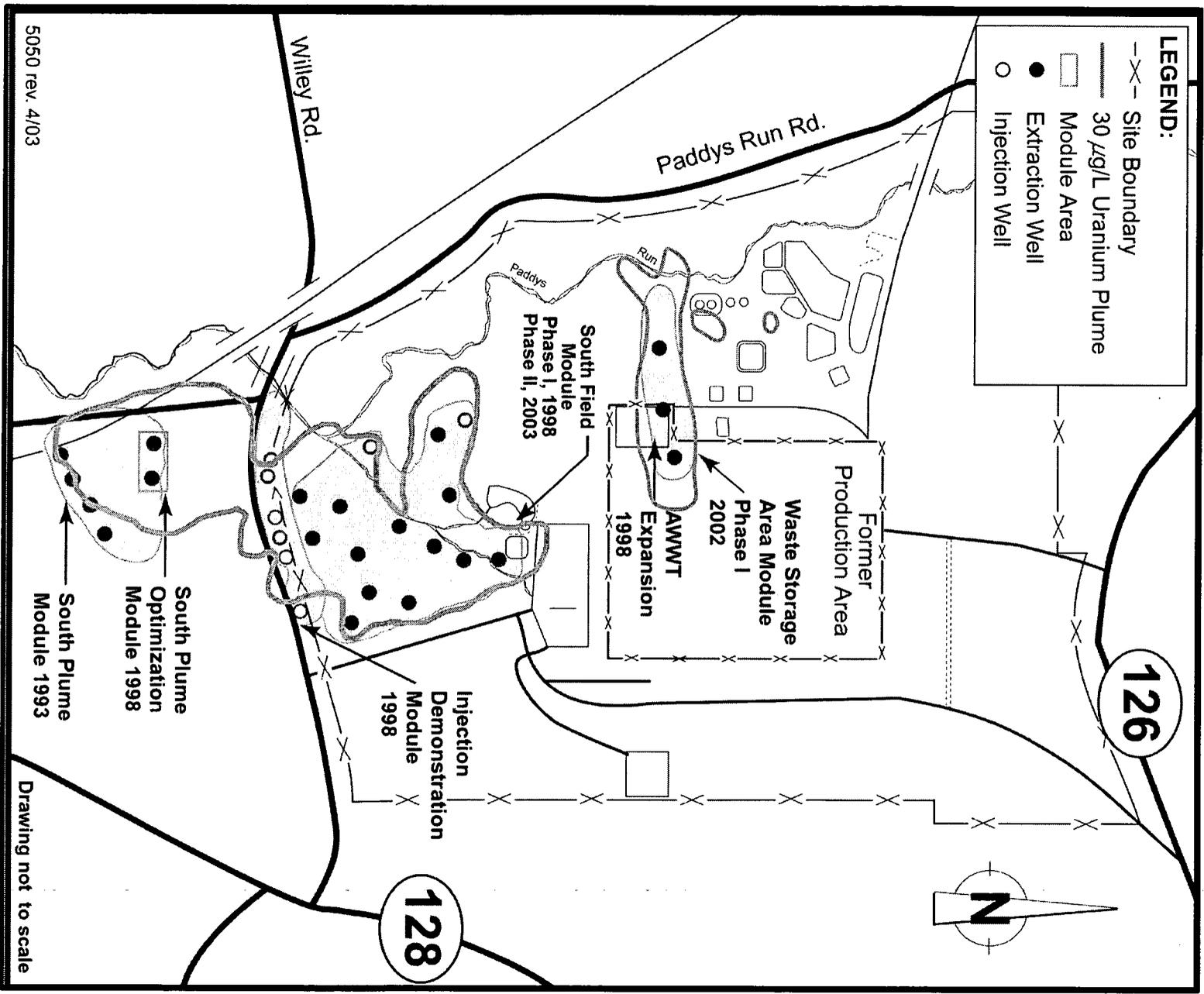
- **Completed construction of the OSDF Cell 6 horizontal monitoring well**
- **Installed replacement groundwater extraction well #21**
- **Repaired OSDF leachate conveyance system force main line**
- **Managing ion exchange treatment facilities to meet the Operable Unit 5 Record of Decision limits for uranium release into the Great Miami River**

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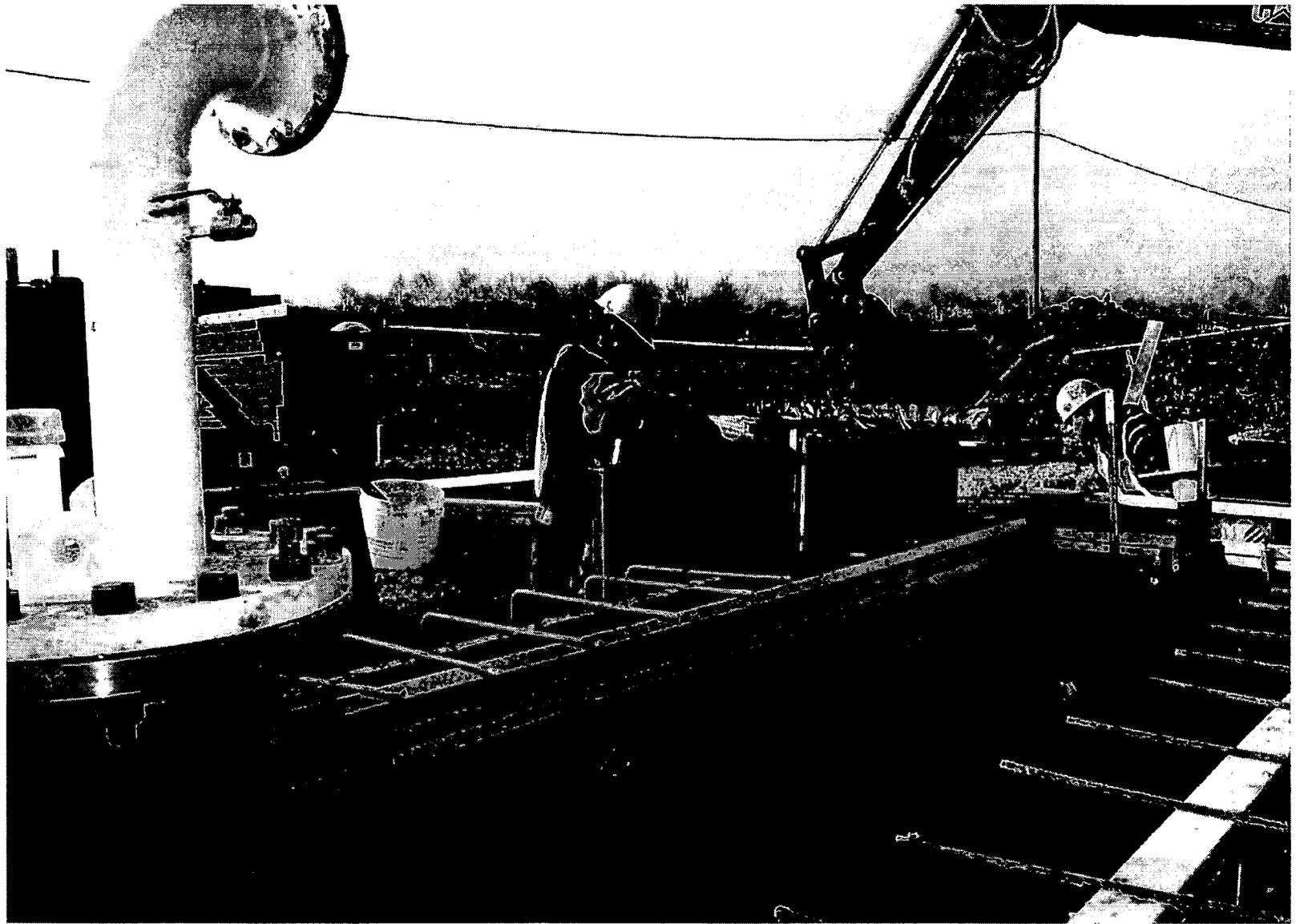
# AQUIFER RESTORATION MODULES AND WELL LOCATIONS



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# INJECTION WELL INSTALLATION



6261-D666  
Graphic 7802.37

Photo taken December 2002

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# GEOPROBE SAMPLING



6469-D012  
Graphic 7802.38

Photo taken January 2003

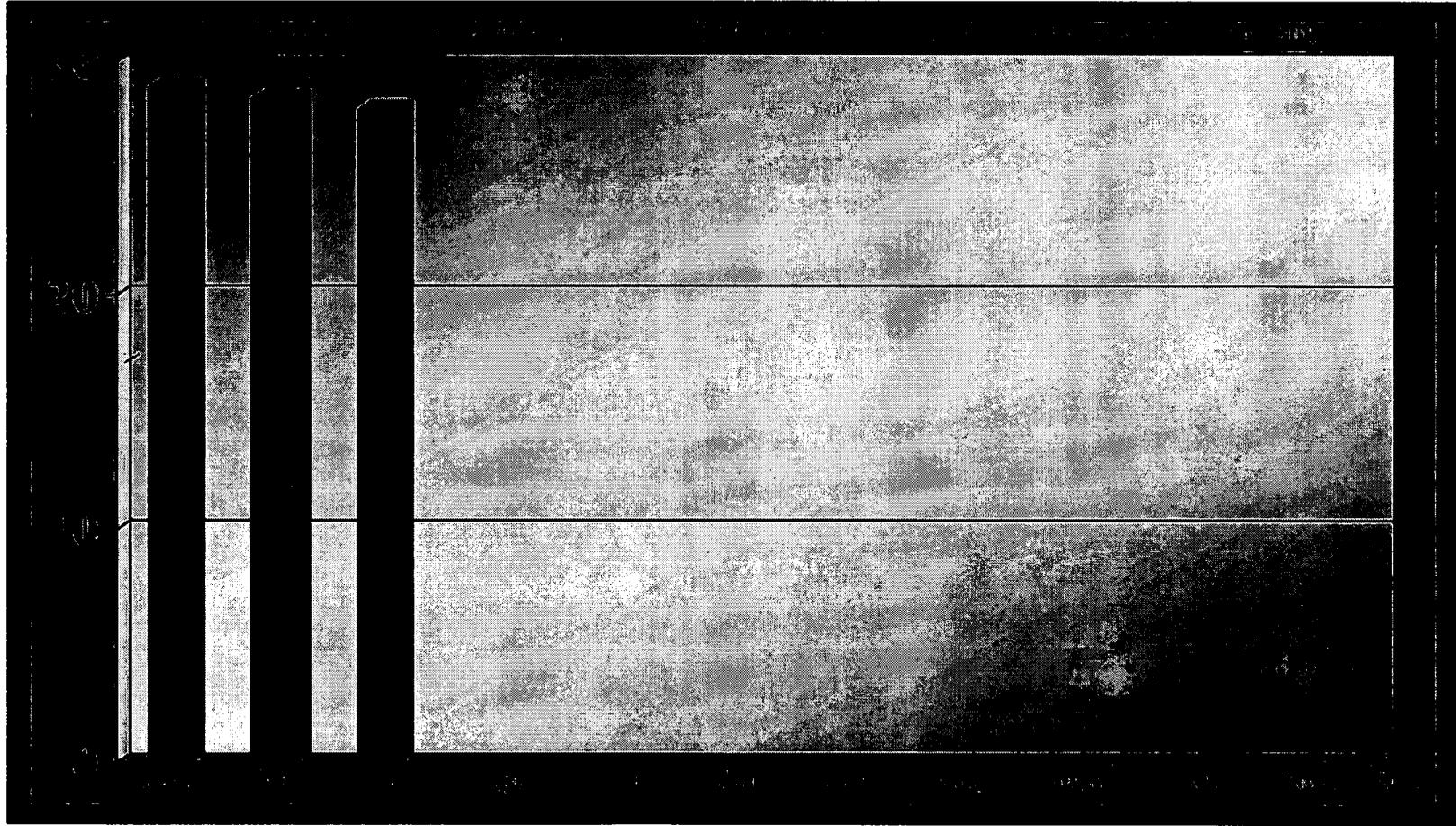
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# AVERAGE MONTHLY TOTAL URANIUM CONCENTRATION DISCHARGED TO THE GREAT MIAMI RIVER IN 2003

Concentration  
(ppb)



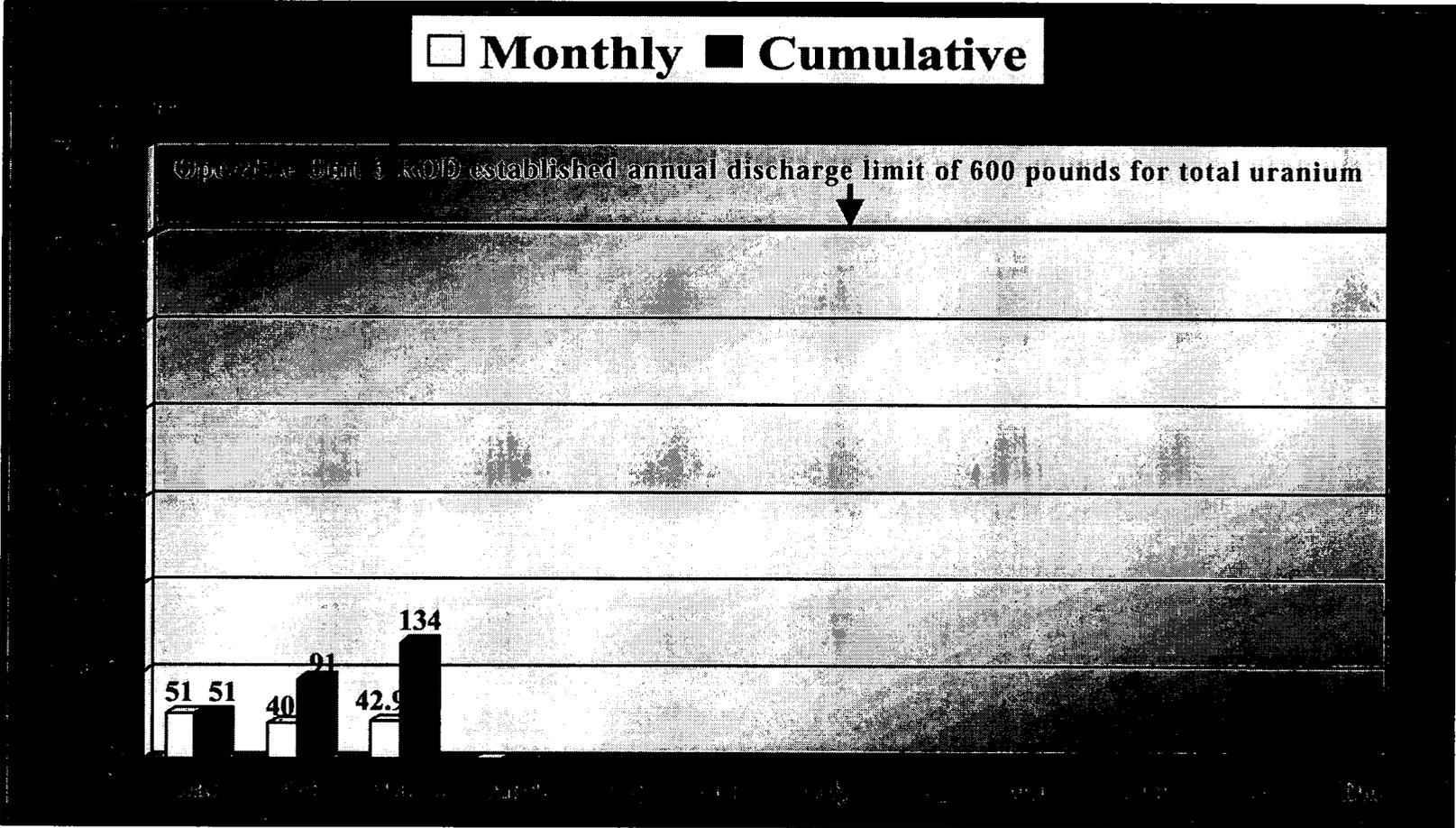
Sample Date

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# POUNDS OF URANIUM DISCHARGED TO THE GREAT MIAMI RIVER IN 2003



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

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# **WASTE MANAGEMENT PROJECT**

- Initiated direct haul of waste containers to Waste Pits Remedial Action Project**
- Completed construction of two portable processing units and began packaging fissile compound materials**
- Sent Batch 13 liquid mixed waste application to the Toxic Substance Control Act Incinerator in Tennessee**
- Transported 41,118 cubic feet of low-level waste off site to the Nevada Test Site in FY2003 so far**

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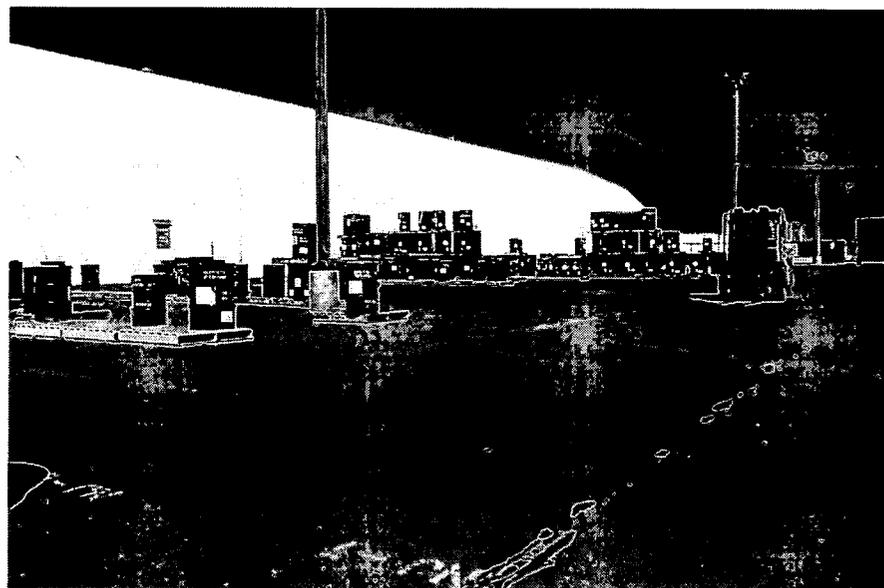
# PLANT 1 PAD PROGRESS

August 2001



7547-D093

April 2003



7547-D0177

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# PORTABLE PACKAGING UNITS



7941-D021  
Graphic 7802.32

Photo taken March 2003

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# PORTABLE PACKAGING UNIT



23-0295

7933-D021  
Graphic 7802.33

Photo taken March 2003

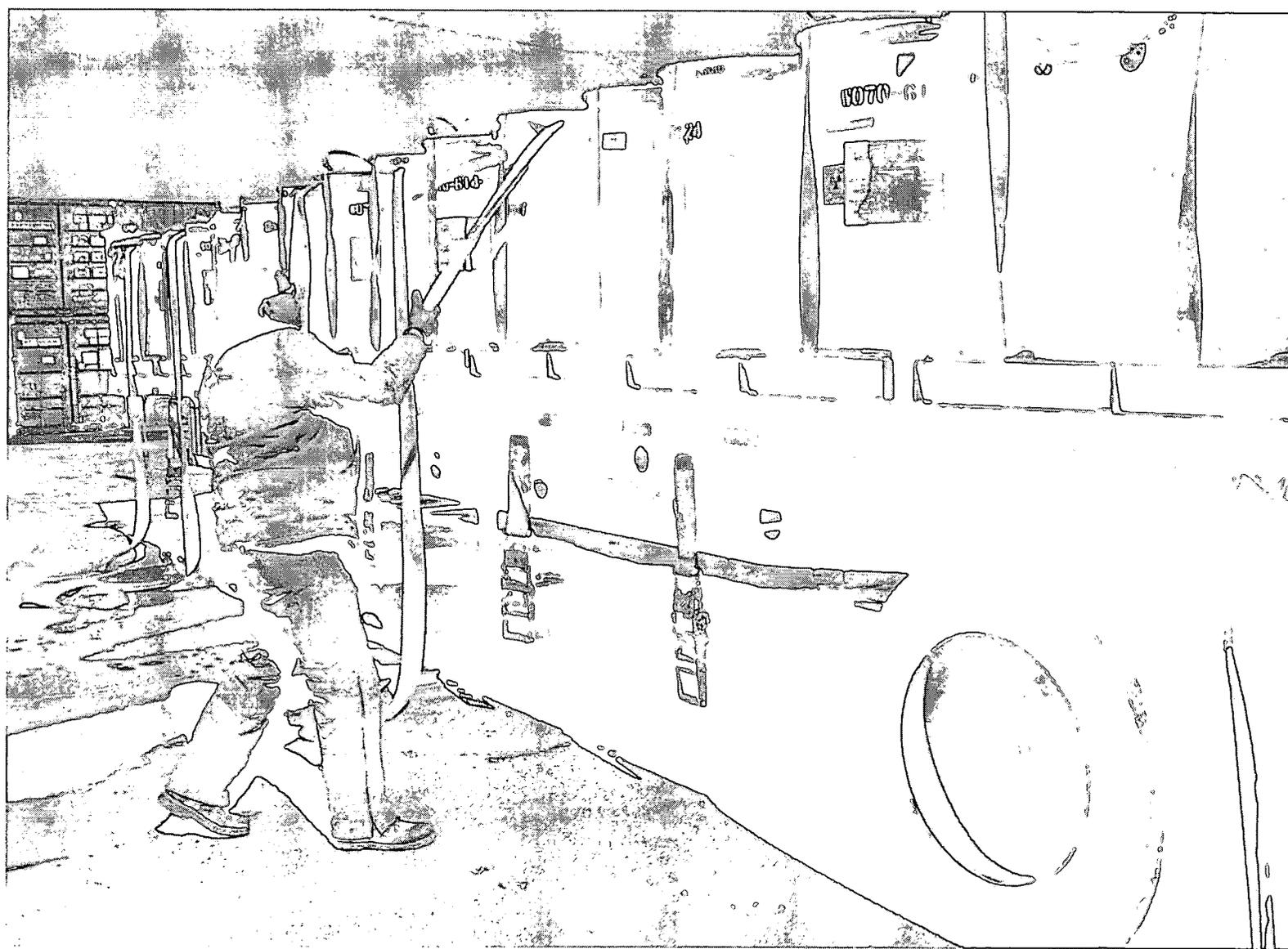
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# DIRECT HAUL



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Graphic 7802.34

Photo taken February 2003

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