FERNALD CLEANUP PROGRESS BRIEFING
OCTOBER 8, 2002

6:30 p.m.	**Opening Remarks**	**Gary Stegner**
6:35 p.m.	**Project Updates**	
Silos		**Ray Corradi**
Waste Pits		**Dave Lojek**
Decontamination & Demolition		**John Trygier**
Soil & Disposal Facility		**Rob Janke**
Aquifer/Wastewater		**Rob Janke**
Waste Management		**Debbie White**

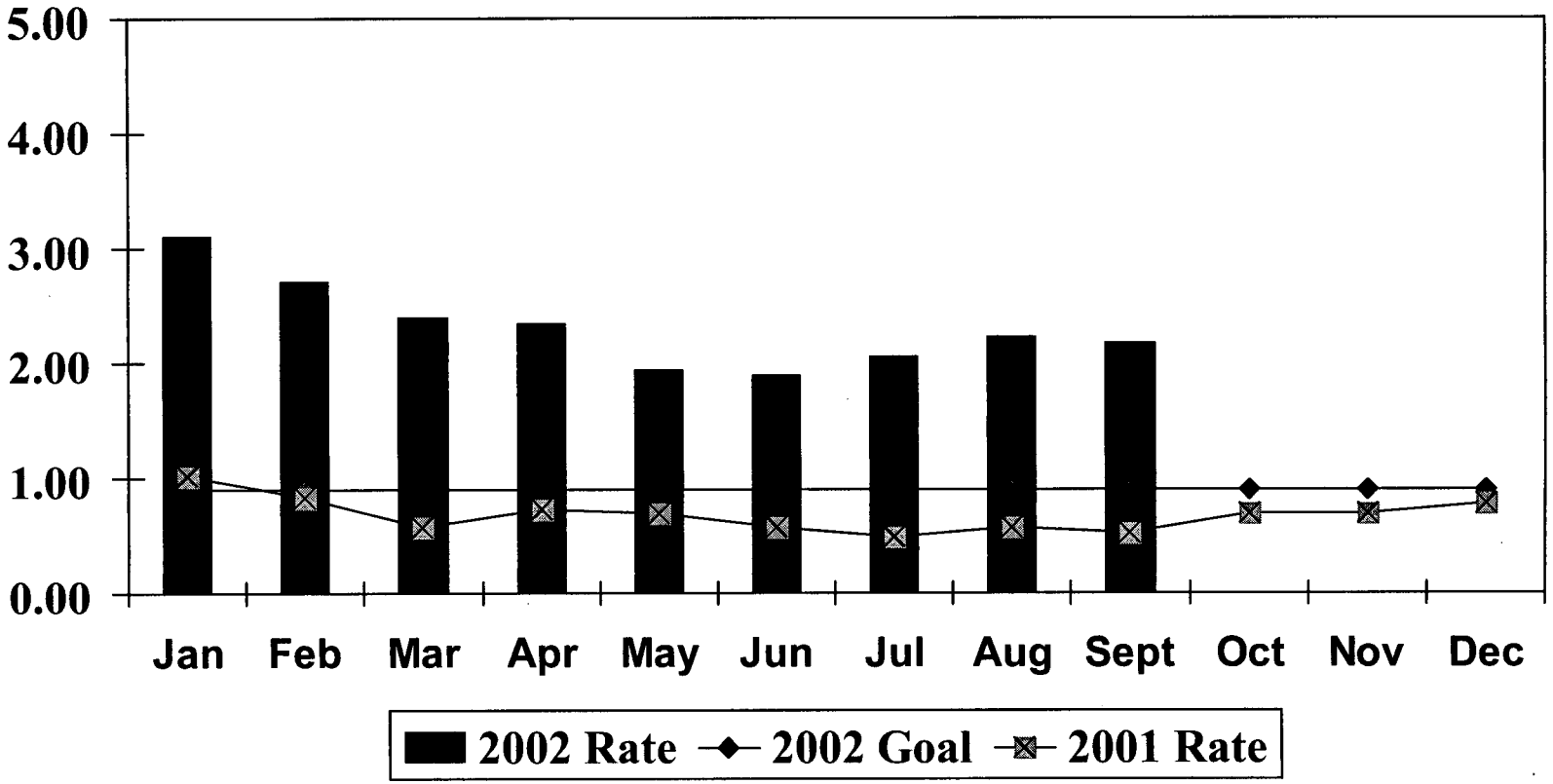
Question and Answer Session

8:30 p.m. Adjourn

Graphics # 7735.0A 10/02

FERNALD
Environmental Management Project

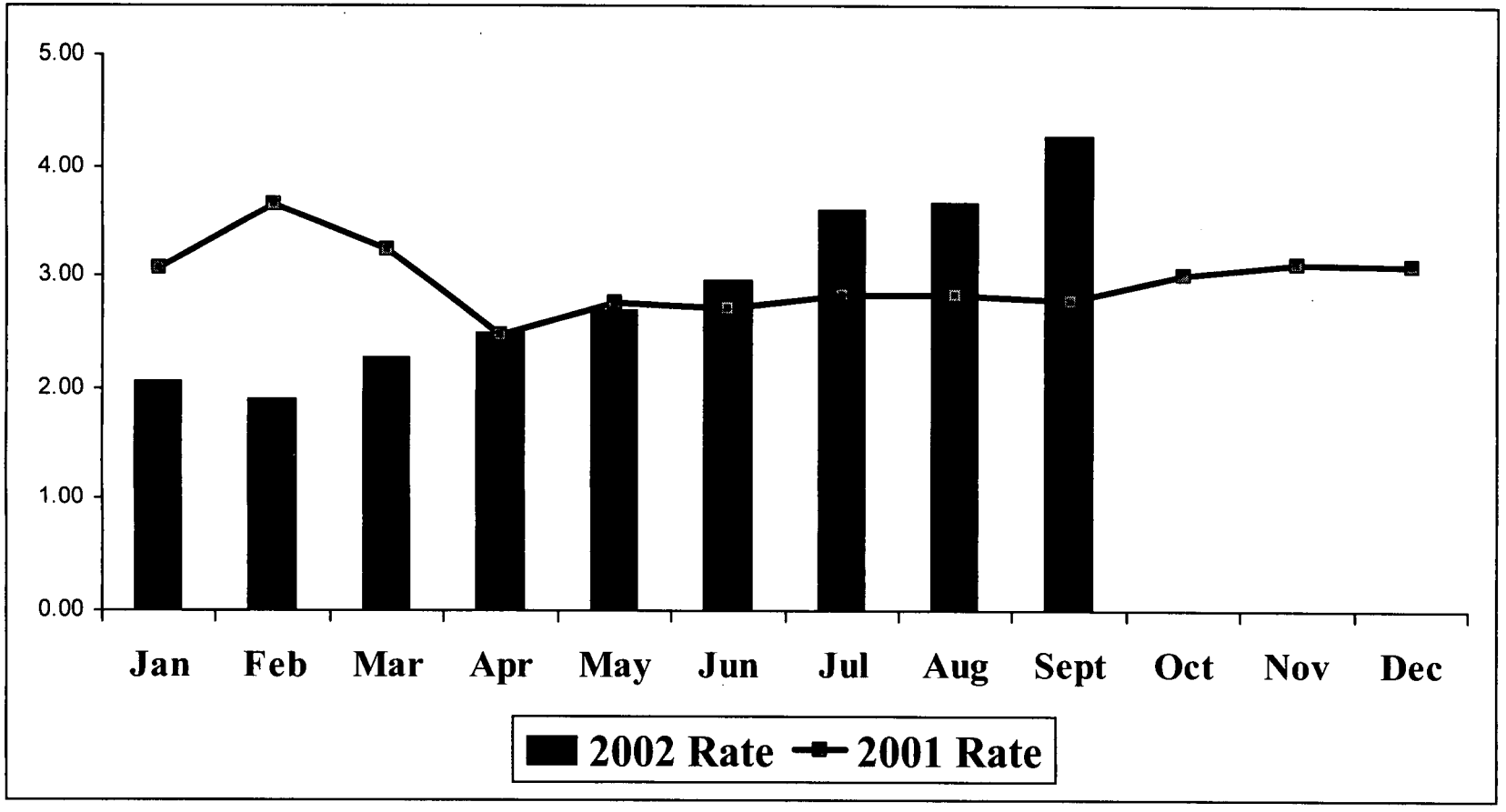
2001 - 2002 OSHA RECORDABLE INCIDENCE RATE



Graphics 7735.1safety 10/02

FERNALD
Environmental Management Project

2001-2002 FIRST AID INCIDENCE RATE



Graphics 7735.2safety 10/02

PROJECT NEWS
Silos 1 and 2

Design:

- **Balance of plant final design in progress**

Equipment procurement packages:

- **Agitator**
- **Mixers**
- **Clarifier**
- **Tanks**
- **Bridge crane**
- **Gantry manipulator**
- **Dry bulk handling**
- **Fill chute**
- **Transfer cart**

Construction:

- **Warehouse**
- **Facility mat foundation**
- **Rail spur, phase I**

Graphics # 7735.1SILOS 10/02

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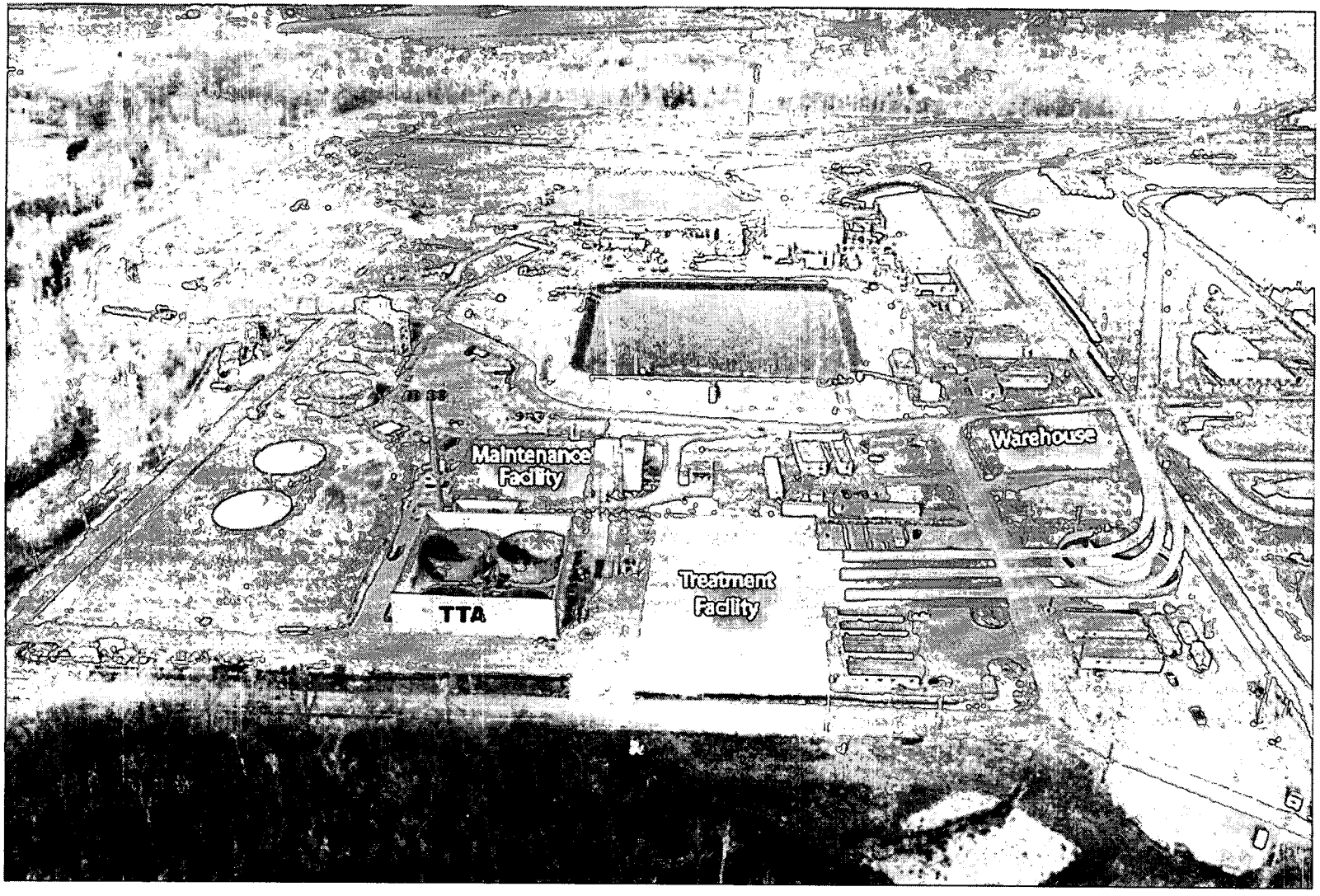
Silos 1 and 2 Rail Spur



Graphics # 7735.2SILOS 10/02

PROJECT NEWS
Silo 3

Design:

- **Balance of plant final design complete**

Equipment procurement packages:

- **Vacuum wand**
- **Packaging system**
- **Excavator**

Construction:

- **Silo 4 reinforcement completed**
- **Silo 3 reinforcement December 2002 – January 2003**
- **Initiated facility foundation preparation**

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PROJECT NEWS
Accelerated Waste Retrieval

Design:

- **Balance of plant progress**

Equipment procurement packages:

- **Steel deck**
- **Retrieval pump and sluicing modules**

Construction:

- **Completed Radon Control System Phase I**
- **Completed Transfer Tanks**
- **Balance of plant in progress**

Operations:

- **Verification of readiness for start of operations Nov. 1**

PROJECT NEWS
Silos

Noteworthy Project Milestones and Documents

- **Sept. 30, 2002: Completed RCS Phase I construction**
- **Nov. 1, 2002: RCS Phase I operation hot test**
- **Silo 3 Draft Proposed Plan**
  - **received EPA's comments**
- **AWR Remedial Design Package**
- **- submitted responses to comments to EPA**
- **Revised RCS Remedial Action Work Plan**
  - **submitted to EPA**
- **Silo 3 Record of Decision Amendment**

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Silo 3 Proposed Plan
ROD Amendment

2002:

- **August – EPA reviewed Draft Proposed Plan**
- **October/November – Fluor Fernald revisions**
- **December – EPA approves draft final of Proposed Plan**

2003:

- **January – public comment and public hearing**
- **February – EPA reviews/approves ROD Amendment**

Milestone: Submit ROD Amendment 60 days after Proposed Plan approval

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Silos Project

Graphics # 7735.7SILOS 10/02

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PROJECT NEWS
WASTE PITS

- **Rail transportation**
- **Waste pit excavation**
- **Dryer operations**
- **Explanation of Significant Differences (ESD) update**

PIT 4 COVER REMOVAL

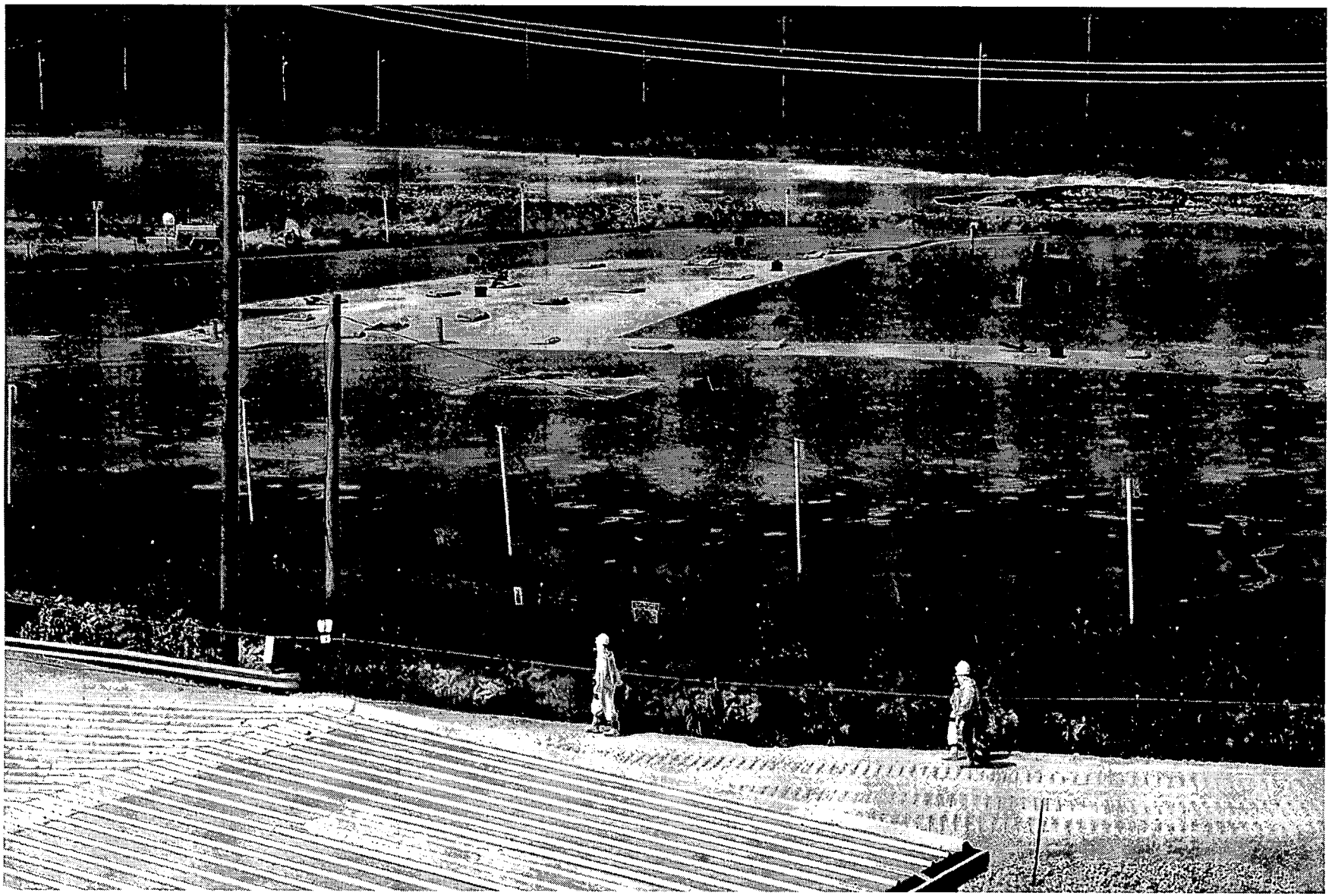

Photo taken August 2002

Graphics # 7735.2WP 10/02 Photo # 6944-D2210

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PIT 4 EXCAVATION

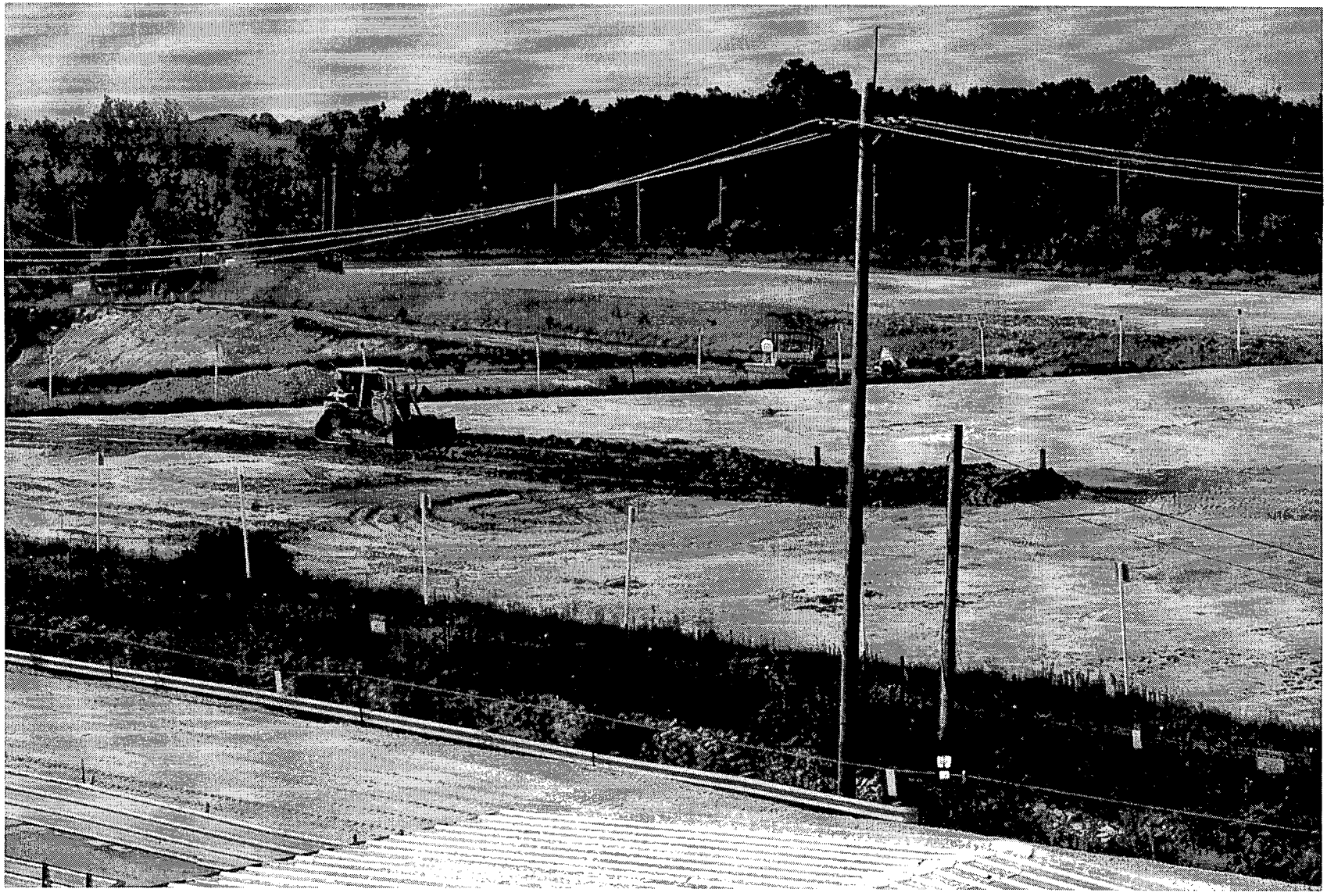

Photo taken September 2002

Graphics # 7735.4WP 10/02 Photo # 6944D-2215

PIT 4 COVER REMOVAL

Photo taken August 2002

Graphics # 7735.3WP 10/02 Photo # 6944D-2191

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PIT 5 EXCAVATION

Photo taken July 2002

Graphics # 7735.5WP 10/02 Photo # 6944D-2172

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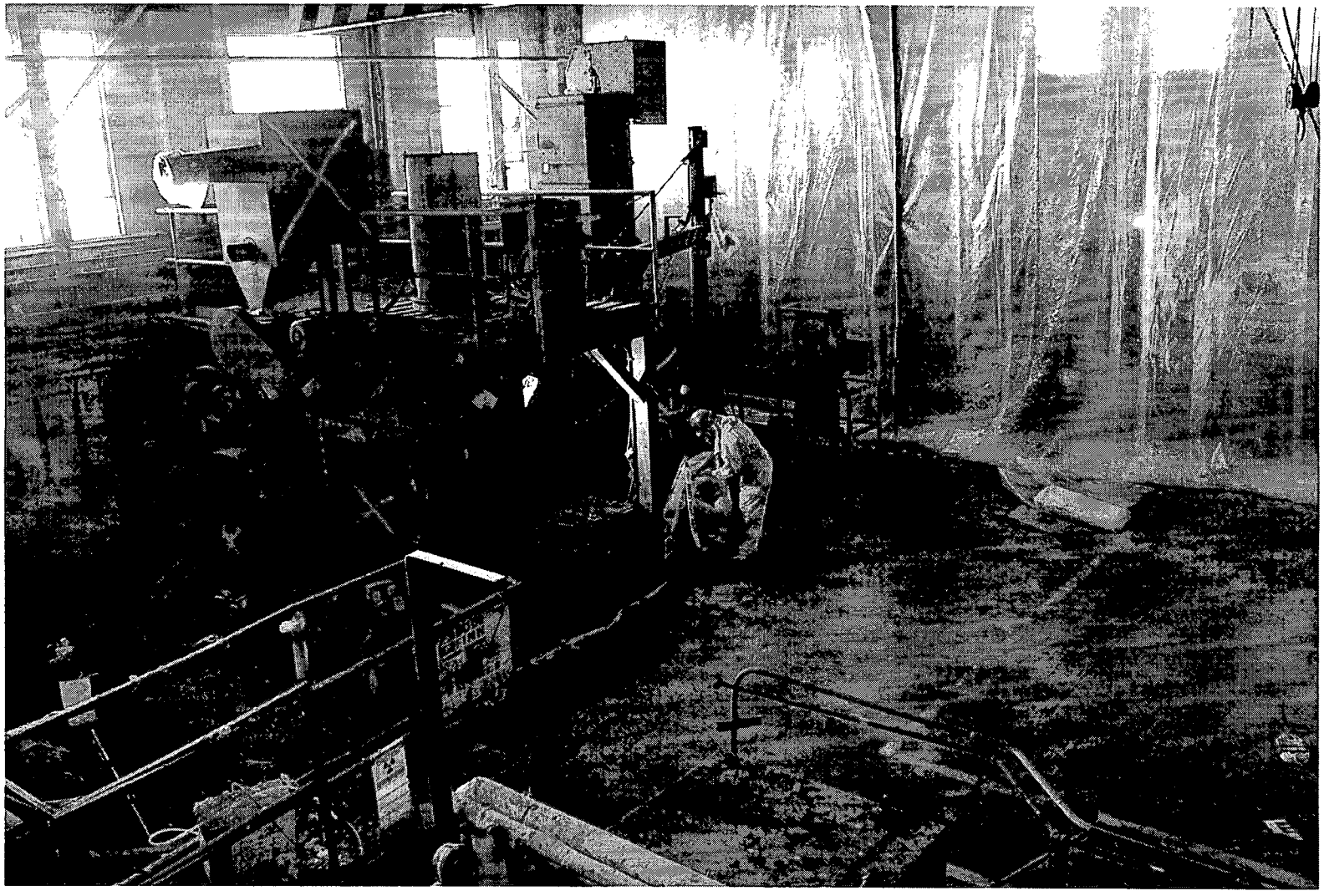
PROJECT NEWS
DECONTAMINATION & DISMANTLEMENT

- **Plant 6**
  - **Completed closure documentation**
- **Multi Complex – Plant 2, Plant 3, Plant 8 and General Sump**
  - **Completed structural demolition of Utility Trench and BDN Treatment Facility**
  - **Continued asbestos abatement, removing equipment, piping, lead and interior transite, and preparing debris for disposition**
- **Pilot Plant**
  - **Completed mobilization and general site prep activities**
  - **Completed structural demolition of the Pilot Plant Warehouse**
- **Miscellaneous D&D Activities**
  - **Completed structural demolition of Safety & Health Building, Thorium Buildings 64 & 65, Pipe Bridge and Covered Storage Pad**

PILOT PLANT



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INCINERATOR BUILDING

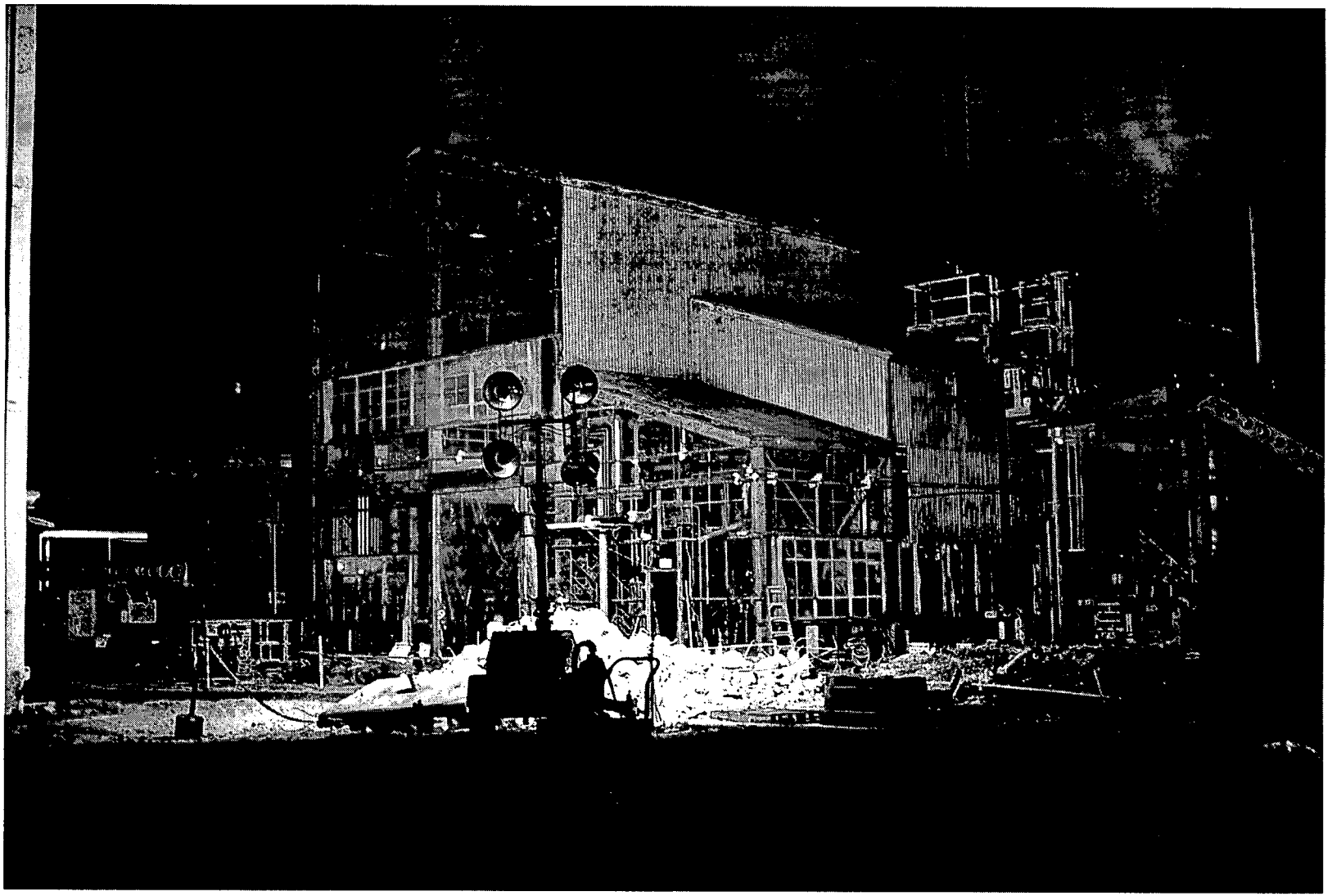

Photo taken August 2002

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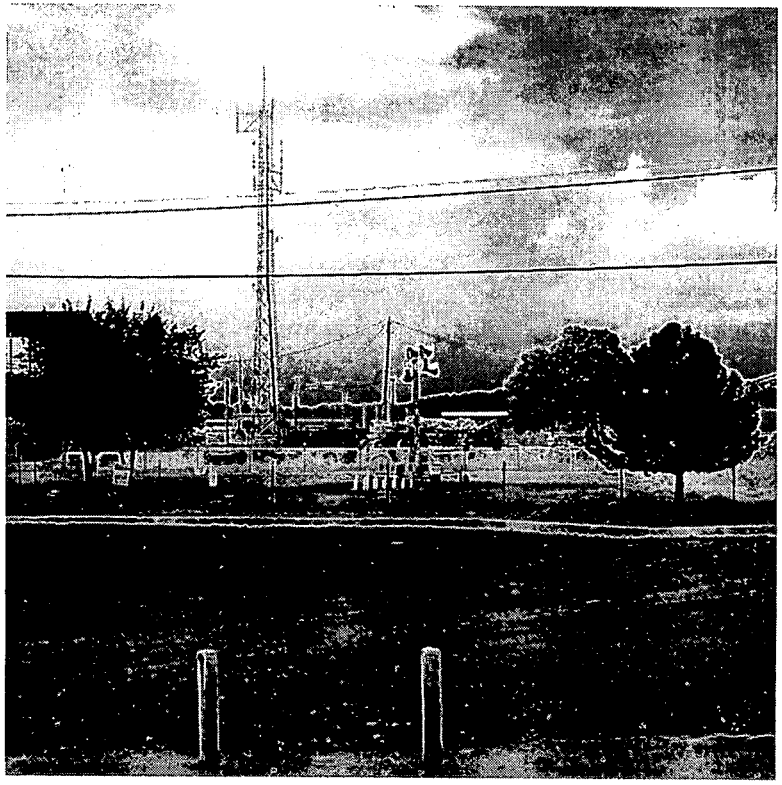
SAFETY & HEALTH BUILDING



Photos taken August 2002

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Graphics # 7735.4D&D 10/02 Photo # 7565-D179 & 7565-D182

PLANT 6

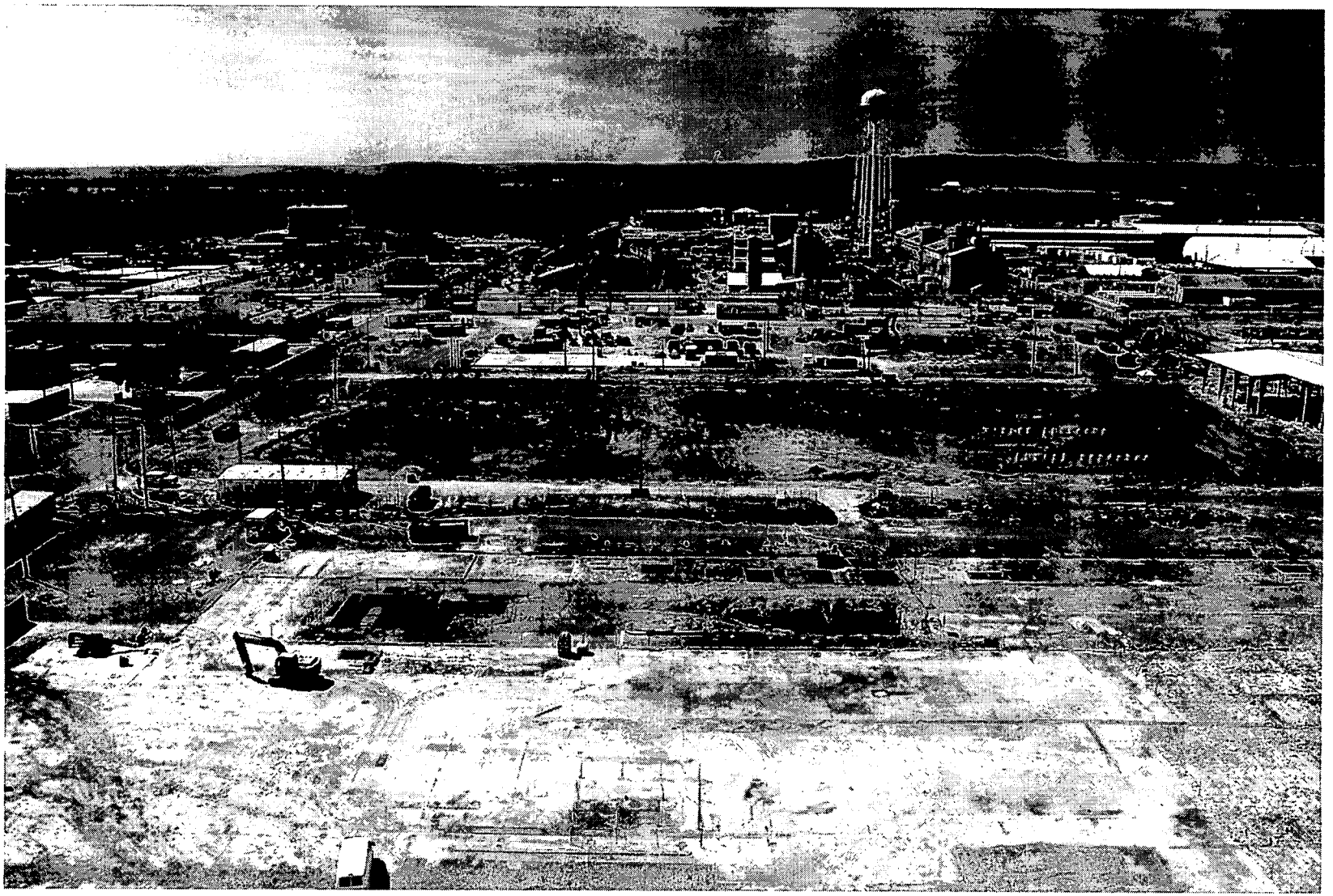

Photo taken September 2002

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PROJECT NEWS
SOIL & DISPOSAL FACILITY

- **Placed 210,000 cubic yards of impacted soil and debris in Cells 2 and 3**
- **On schedule to complete construction of Cell 4 and Cell 5 liners in December**
- **Excavation areas:**
  - **Northeastern quadrant of production area**
  - **Lime sludge ponds**
  - **Silos area to support Treatment Plant site preparations**
  - **Area 2, Phase II (Silos laydown area)**
- **Restoration areas:**
  - **Southern Waste Units**
  - **Northern Pines**

Graphics # 7735.1S&D 10/02

LINER INSTALLATION

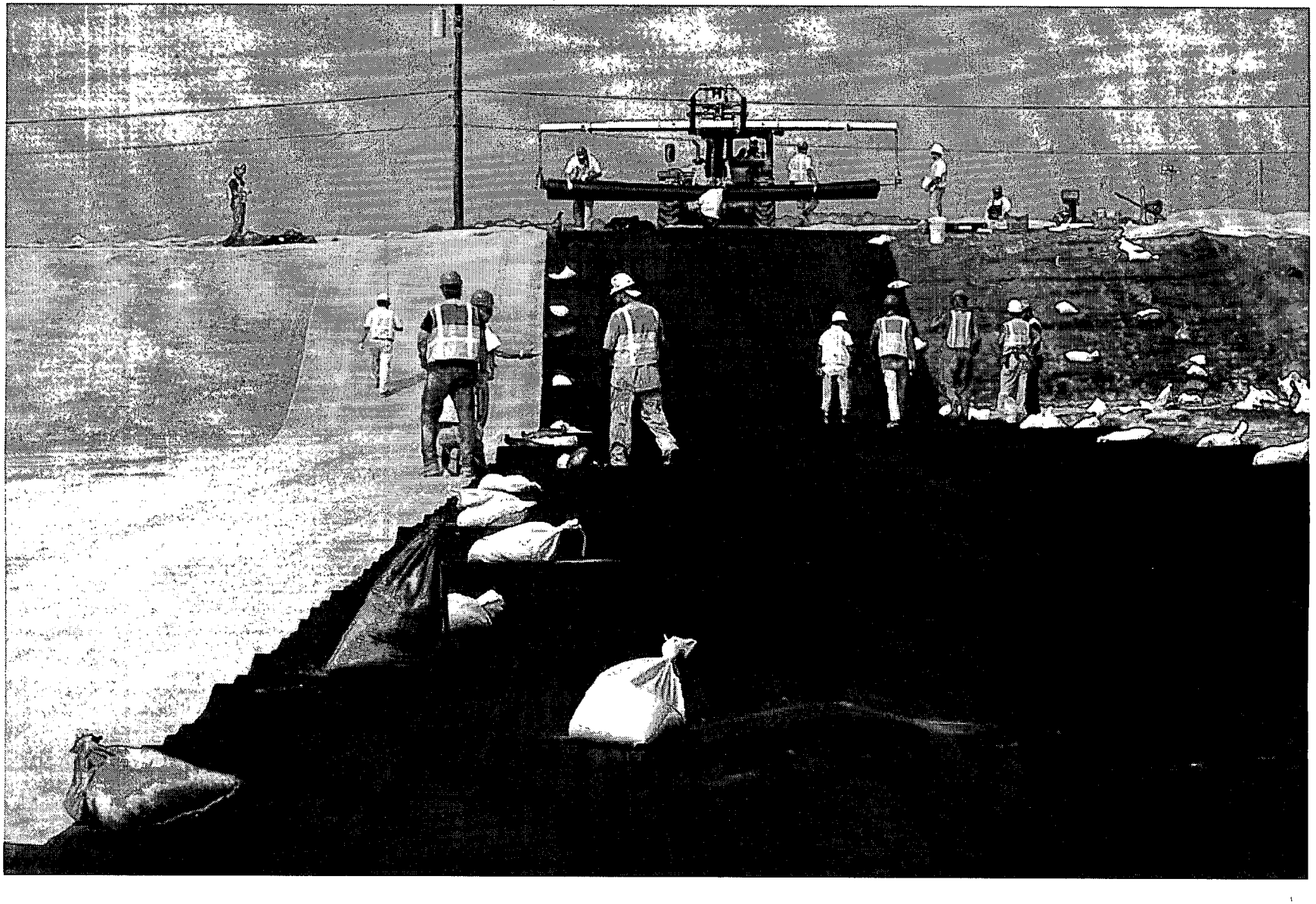

Photo taken August 2002

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LIME SLUDGE PONDS

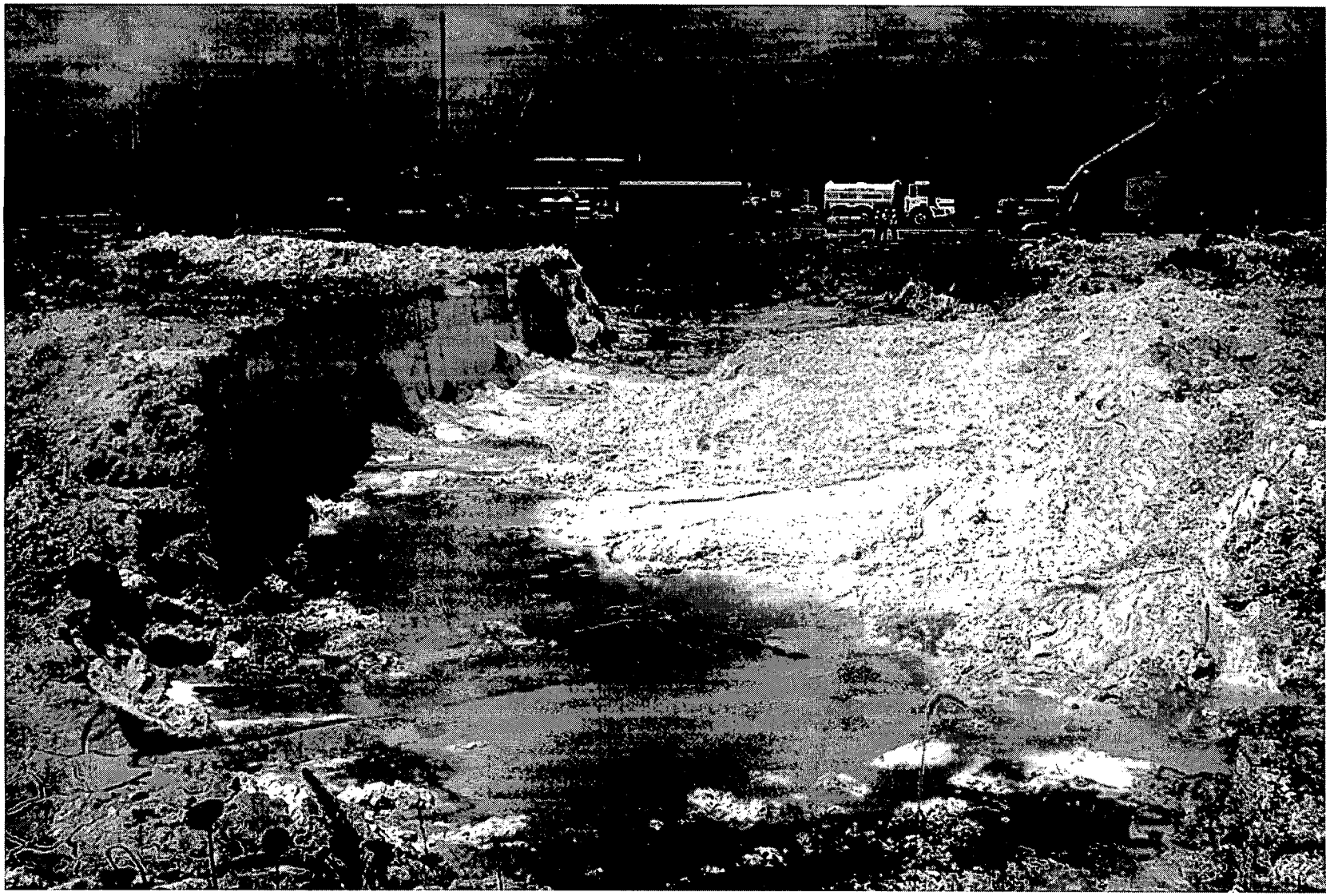

Photo taken August 2002

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EXCAVATION AT SILOS

Photo taken July 2002

Graphics # 7735.4S&D 10/02 Photo #7385-D1903

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RESTORATION AT SWU

Photo taken July 2002

Graphics # 7735.5S&D 10/02 Photo #7800-D74

PROJECT NEWS
AQUIFER /WASTEWATER

- **Installed four extraction wells, one injection well, and 26 monitoring wells in preparation for South Field Phase II module**

- **Prepared design and awarded contract to Pangea Group to construct infrastructure for South Field Phase II module**

- **Awarded contract to DeBra-Kuempel to construct infrastructure needed for relocating two injection wells and adding a new injection well**

PROJECT NEWS
AQUIFER /WASTEWATER

- **Completed modifications to three on-site portable lab trailers that will house some laboratory functions**

- **Completed modifications to convert the Sewage Treatment Plant east aeration tank to a flow equalization facility**

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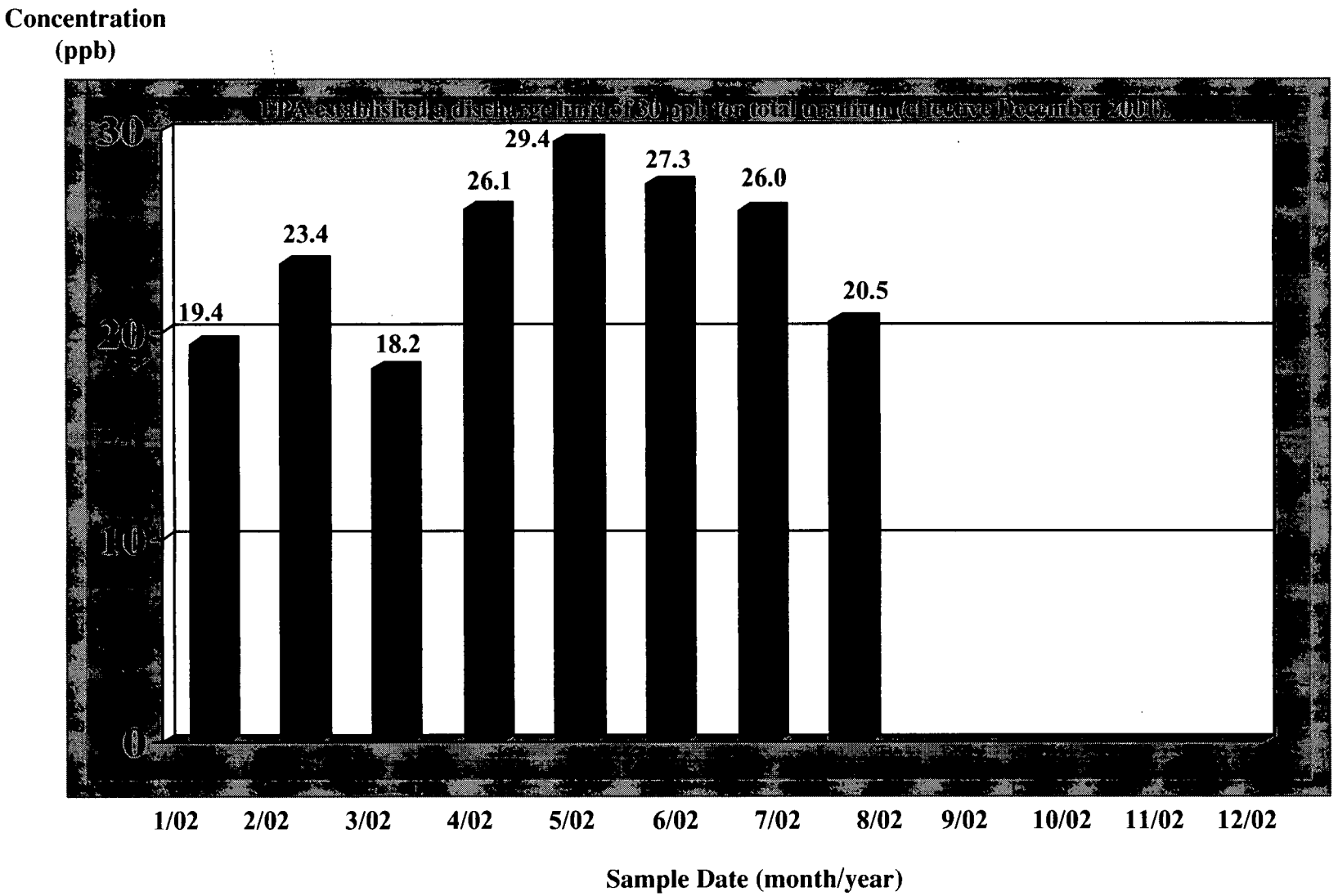
AVERAGE MONTHLY TOTAL URANIUM CONCENTRATION DISCHARGED TO THE GREAT MIAMI RIVER IN 2002



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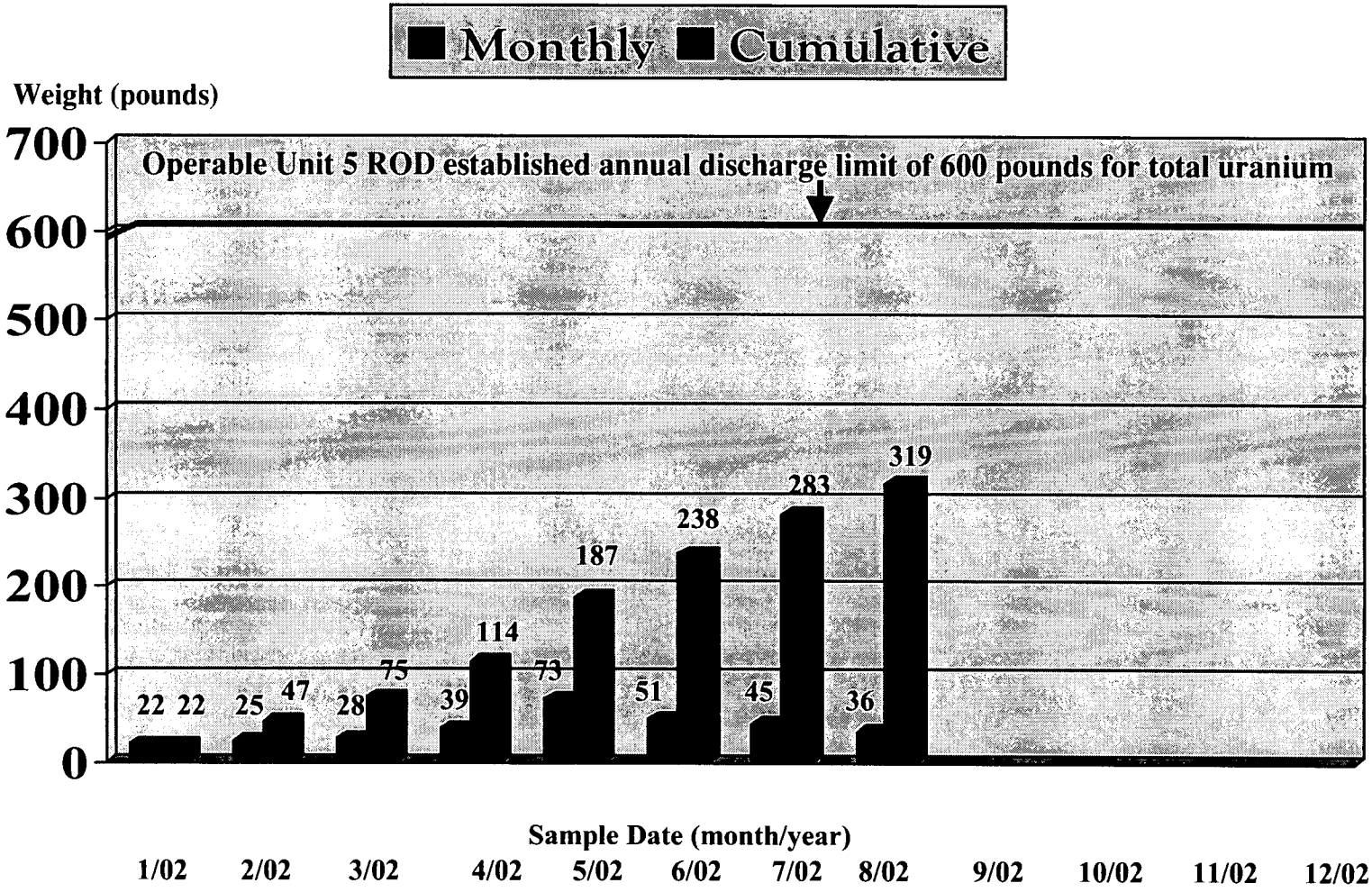
POUNDS OF URANIUM DISCHARGED TO THE GREAT MIAMI RIVER IN 2002



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

Graphics # 7735.4AQ 10/02

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WELL INSTALLATION

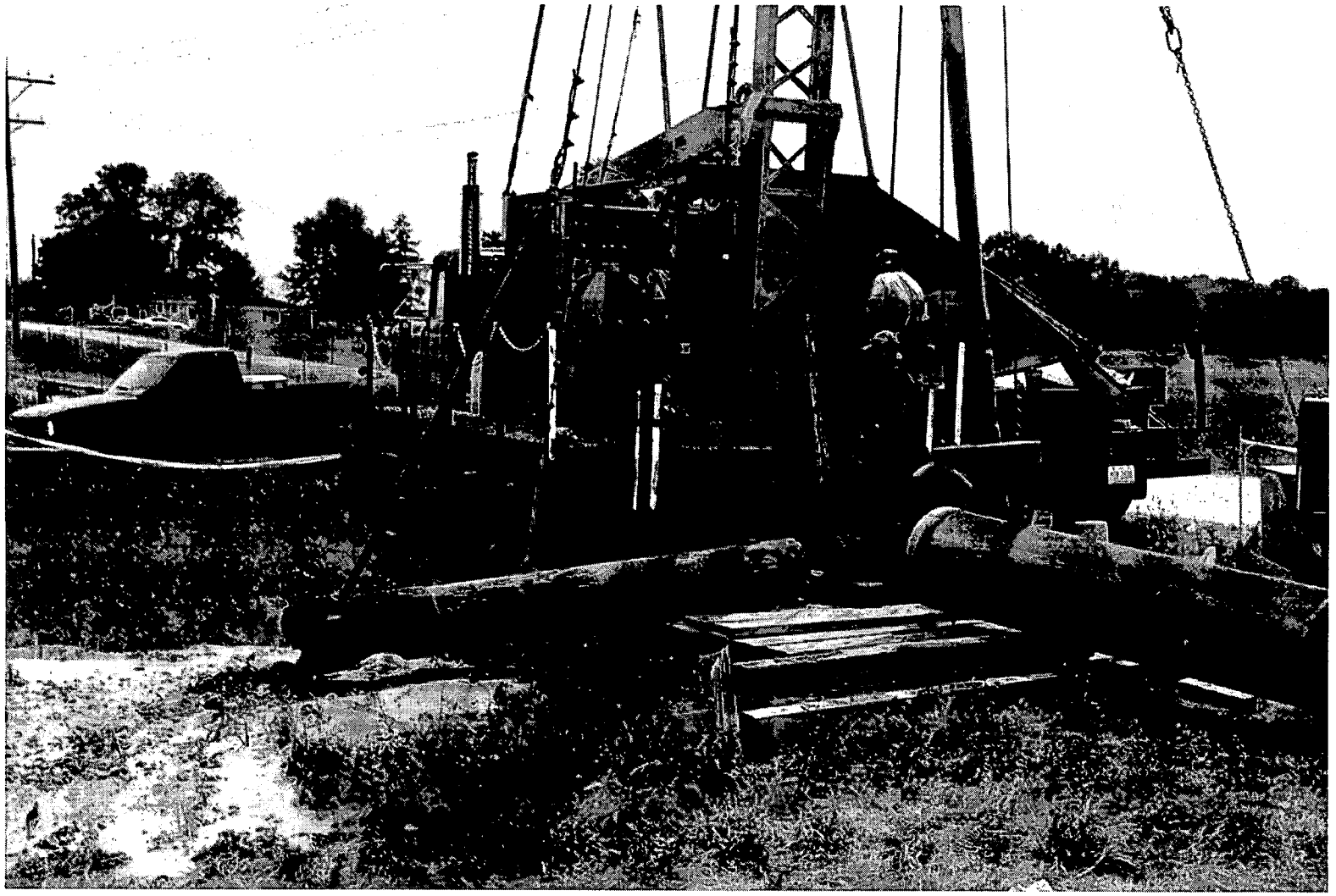

Photo taken June 2002

Graphics # 7735.5AQ 10/02 Photo # 6261-D632

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WELL INSTALLATION

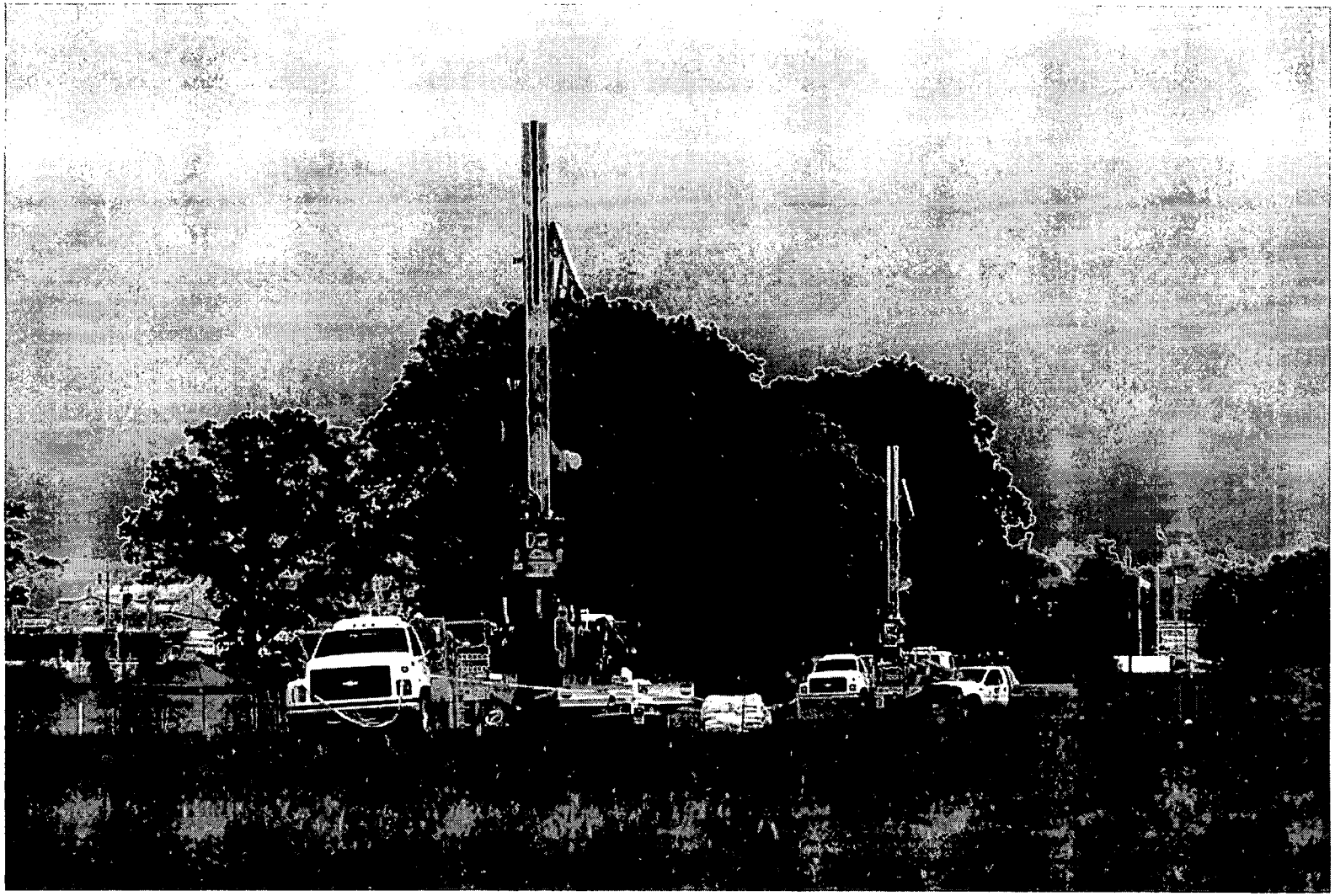

Photo taken June 2002

Graphics # 7735.6AQ 10/02 Photo # 6261-D638

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PROJECT NEWS
WASTE MANAGEMENT

FY02 ACCOMPLISHMENTS

- **Nuclear Materials**
  - Completed off-site disposition of remaining nuclear material inventory

- **Low-Level Waste**
  - Dispositioned 590,600 cubic feet of low-level waste
    - m 259,000 cubic feet to Nevada Test Site
    - m 81,600 cubic feet to WPRAP/Envirocare
    - m 250,000 cubic feet to OSDF

Graphics # 7735.1WM 10/02

PROJECT NEWS
WASTE MANAGEMENT

FY02 ACCOMPLISHMENTS

- **Mixed Waste**
  - **Shipped 890 cubic feet of organic waste**
  - **Site Treatment Plan Milestones**

- Legacy Wastewater	June 30,2002	Complete
- TSCA Incinerator, Batch 11	September 30, 2002	Complete
- Ship Inorganic Waste	September 20, 2002	Complete

  - 270 cubic feet of mercury waste
  - 3,000 cubic feet of lead/acid batteries
  - 6,400 cubic feet of inorganic soil/debris
  - 110 cubic feet of mercury

- **Issued contract to Envirocare to treat organic waste using Vacuum Assisted Thermal Desorption technology**

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Graphics # 7735.2WM 10/02

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FACT SHEET

EXPLANATION OF SIGNIFICANT DIFFERENCES TO THE OPERABLE UNIT 1 RECORD OF DECISION MANAGEMENT OF MATERIALS FROM OTHER FEMP PROJECTS

INTRODUCTION:

This fact sheet provides a brief description of the U.S. Department of Energy's (DOE's) Explanation of Significant Differences (ESD) to the Operable Unit 1 (OU1) Record of Decision (ROD) at the Fernald Environmental Management Project (FEMP) in Fernald, Ohio. The OU1 ROD was signed on March 1, 1995 by the DOE and the U.S. Environmental Protection Agency (USEPA) Region 5. This ESD has been prepared to describe a change to allow material from other FEMP projects to be managed via the mechanisms established through the OU1 ROD for disposal, with the OU1 wastes, at a permitted commercial disposal facility (i.e., Envirocare of Utah). DOE, and both U.S. and Ohio EPAs, agree that the change provided through this ESD is significant but not fundamental because it does not change cleanup levels or the basic remedy for removal, safe transportation, and offsite disposal of the OU1 waste stream.

PROPOSED CHANGE:

This ESD has been prepared to formally provide for the processing of other FEMP waste streams through the OU1 remediation facilities. These waste streams will be low-level radiological wastes (i.e., no RCRA hazardous wastes) that, with processing available as part of OU1 remedial actions (including mixing with waste pits materials), can meet the waste acceptance criteria (WAC) at Envirocare. Further, the characteristics of these non OU1 waste streams will be such that managing them through OU1 remedial systems will not negatively effect the site's ability to meet the performance requirements set forth in the OU1 ROD. This ESD specifically prohibits the processing of any wastes from outside the FEMP through the OU1 remediation facility.

BASIS FOR CHANGE:

As plans for the OU1 remediation system were formulated, facilities constructed, and remedial action activities implemented, the potential for treatment of materials from other FEMP projects has always been a factor for consideration. Specifically, as it became clear to the site that some FEMP soils and other waste materials (with characteristics reasonably similar to those to be encountered through OU1 waste pit excavation activities), would require disposition off site, the ability to accommodate these materials was integrated into the OU1 remedial action approach. The OU1 ROD presents a detailed discussion on the cost and safety advantages of bulk rail shipment of OU1 waste for disposal as compared to shipment by truck. These same advantages apply to utilizing the OU1 remedial infrastructure for disposal of other FEMP waste streams, and is consistent with the site plan for accelerated closure.

During finalization of the Operable Unit 5 (OU5) ROD, it was envisioned that excavated soils demonstrating contaminant concentrations above the WAC of the On-Site Disposal Facility (OSDF) would be dispositioned off site through the OU1 remedial infrastructure. Accordingly, other FEMP waste streams identified for management through the OU1 remediation facility included soils and soil-like material which did not meet the OSDF WAC, but could be disposed of at Envirocare without the need for treatment. In other words, this material could be managed through the OU1 remediation facility with minimal effort/impact. To date, over 50,000 tons of soil and/or soil-like material have been processed in this manner, with more planned for future processing.

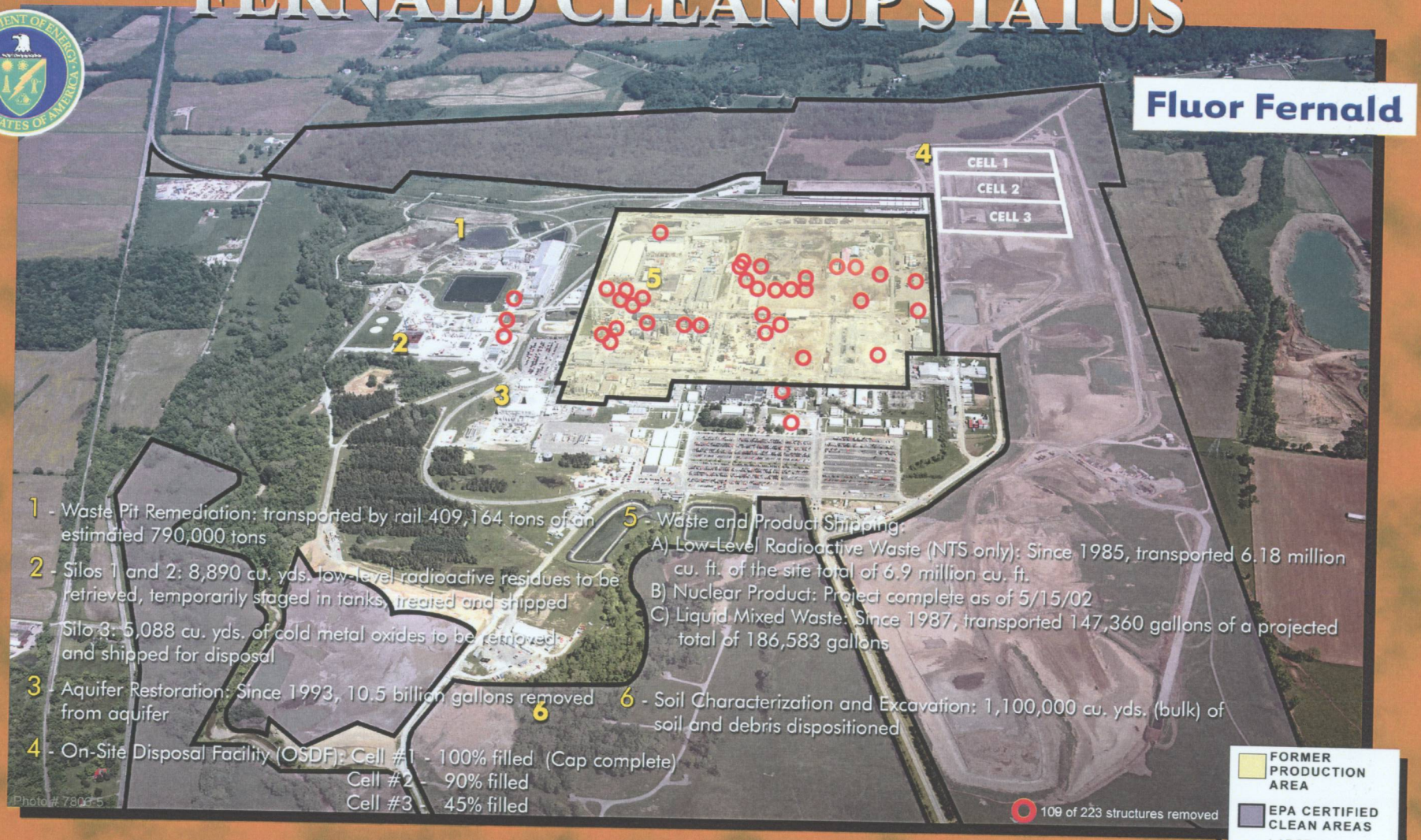
Besides the OU5 waste streams, other FEMP waste streams have been identified which have the potential to be managed through the OU1 remediation facility with disposal at Envirocare, and in doing so save cost/time in completing the overall FEMP remediation. An example waste stream is approximately 600 containers of enriched, non-restricted, uranium waste. Unlike the initial other FEMP wastes, however, some of these new waste streams may require processing through the OU1 remediation facilities, may require augmentation of existing facilities to perform all necessary management/treatment, and/or may require mixing with OU1 waste pit material to provide for a product which meets the Envirocare WAC. Although the management of these additional FEMP waste streams through the OU1 facility does not fundamentally change the plan identified in the OU1 ROD, it has the potential to become a significant element of the OU1 remediation process.

IMPACT:

Processing these other FEMP waste streams (destined for off-site disposal) through the OU1 remediation facilities will allow the FEMP to take advantage of cost and safety advantages provided through bulk rail shipment. Specifically, bulk rail transportation is safer due to lower total shipping mileage, and cheaper due to economies of scale offered by bulking.

The processing of these waste streams will be implemented while preserving the basic elements of the plan for the remediation of OU1, as spelled out in the OU1 ROD. The change provided through this ESD does not change the protectiveness of the OU1 remedy because it does not change the basic remedy of removal, safe transportation, and off-site disposal of the OU1 waste streams. In addition, the applicable or relevant and appropriate requirements (ARARs) established in the OU1 ROD are not modified by this ESD.

FERNALD CLEANUP STATUS



AS OF AUGUST 31, 2002

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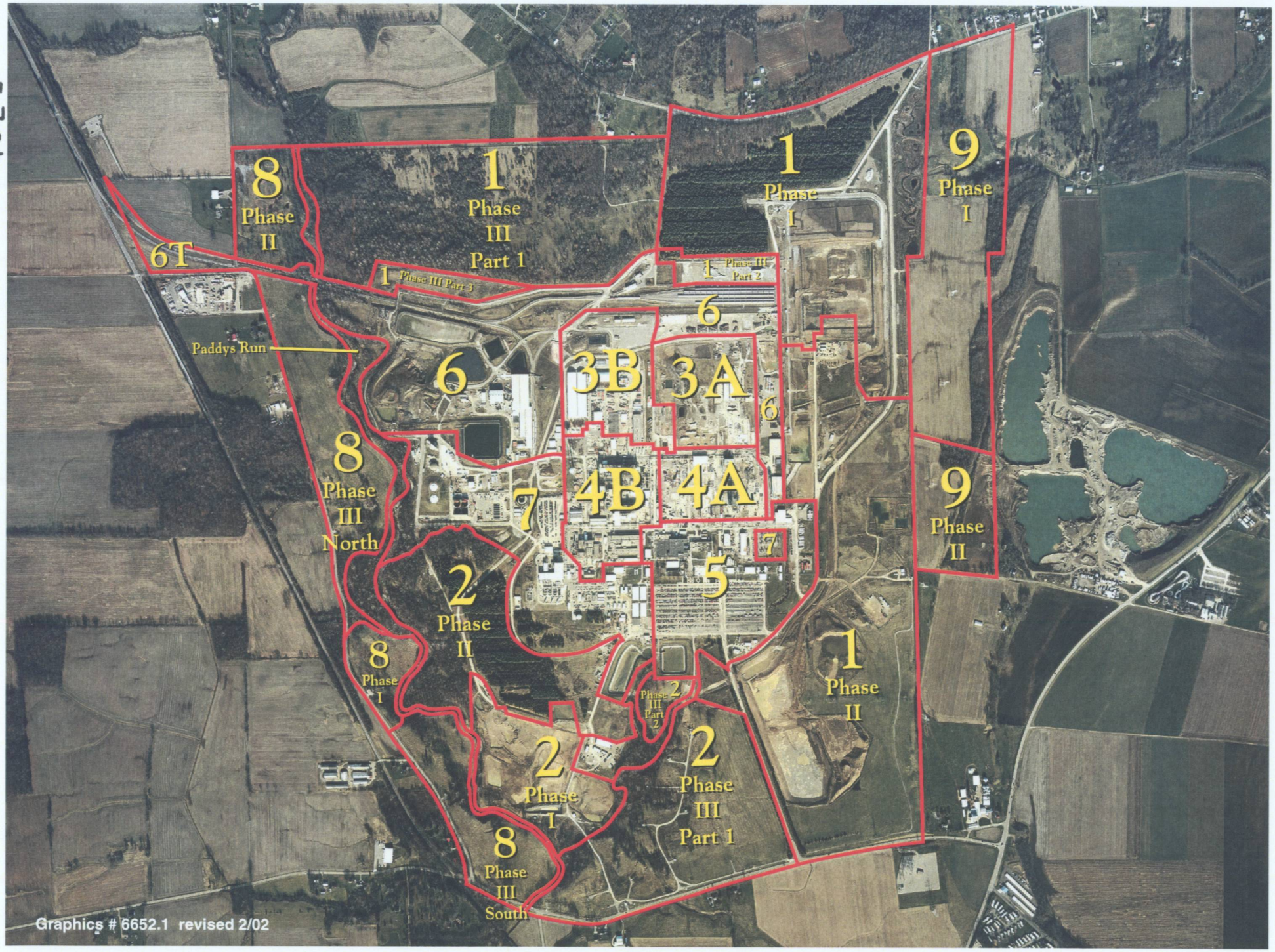
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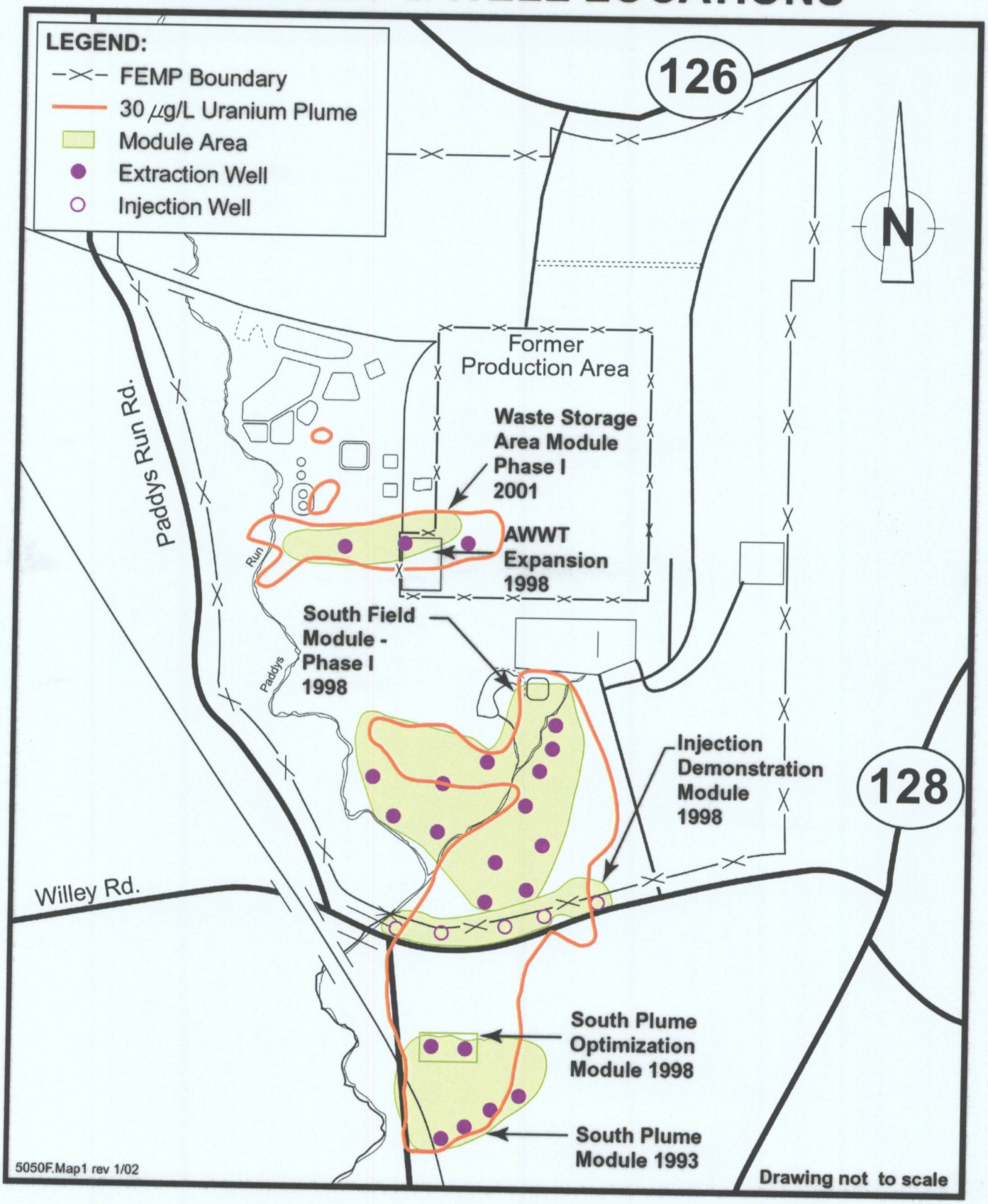
CURRENT AQUIFER RESTORATION MODULES & WELL LOCATIONS