

**MEMORANDUM  
SITE SPECIFIC ADVISORY BOARD**

**TO:** SSAB Members  
Ex Officio Members

**FROM:** Mark Donham  
Vicki Jones

**DATE:** May 6, 1997

**SUBJECT: MEETING REMINDER**

The next SSAB meeting will be May 22, 1997, at 6:00 p.m. in the Heath High School. The following is the tentative agenda and action items:

**Tentative Agenda**

Minutes  
EMEF Project Updates  
FFA Update  
Membership Update  
Northeast Plume Presentation  
Review of the 10 Year Plan  
Draft Work Plan  
WAG 6 Presentation  
WAG 22 Presentation

**Action Items**

Jimmie Hodges will check on the rubble testing results for Ronald Lamb's property.  
Jimmie Hodges will write letter to DOE Headquarters to get approval on new members.  
Jimmie Hodges will send out Radiation Limits document written by Dr. Lee to the Board.  
The Co-Chairs will prepare a Draft Work Plan for presentation to the Board for the May meeting.

# PADUCAH GASEOUS DIFFUSION PLANT SITE SPECIFIC ADVISORY BOARD

Chartered under the  
Federal Advisory Committee Act

## CO-CHAIRS

Mark Donham  
Route 1  
Brookport, Illinois 62910  
mandk@midwest.net

## Vicki Jones

1131 Hamburg Road  
Kevill, Kentucky 42053  
jonesvw@oml.gov

## BOARD MEMBERS

Nola Courtney  
14299 Wickliffe Road  
Kevill, Kentucky 42053

Tommy Fletcher  
5420 Tuck Road  
Paducah, Kentucky 42001

David Fuller  
670 Springwell Lane  
Paducah, Kentucky 42001

Rev. W.G. Harvey, Sr.  
1429 Reed Avenue  
Paducah, Kentucky 42001

William L. Kressenberg  
2517 Jefferson Street  
Paducah, Kentucky 42001

Ronald Lamb  
10990 Ogden Landing Road  
Kevill, Kentucky 42053  
CHCE@LDD.net

Linda Long  
10625 Ogden Landing Road  
Kevill, Kentucky 42053

Connie J. Sykes  
705 N. 24th Street  
Paducah, Kentucky 42001

Rev. Gregory Waldrop  
701 Broadway  
Paducah, Kentucky 42001

## Informal Meeting Minutes

May 22, 1997

The May 22, 1997, SSAB meeting took place at Heath High School at 6:00 p.m.

The following board members were present: Nola Courtney, Mark Donham, Tommy Fletcher, Vicki Jones, and Linda Long. Ex Officio members present were: Carl Froede, Annette Hayden, Jimmie Hodges, and John Volpe. Facilitator Present: Steve Kay. Also present were: Todd Adams, Carlos Alvarado, Jeannie Brandstetter, Jay Clausen, Bryan Clayton, Dave Dollins, Teresa Fields, Tamara Guy, Steve Hampson, Shelley Hawkins, Dennis Hill, Todd Mullins, Bob Pratt, Myrna Redfield, Bill Tanner, and Tuss Taylor.

It was decided for the convenience of the people giving the presentations that they would be moved to the first of the agenda. The other additions were a discussion on the ex-officio position for Kentucky Division of Waste Management (KDWM) and a request to be placed on the June agenda by Julie Watts of the Agency for Toxic Substances and Disease Registry (ATSDR).

The minutes from the April 17, 1997, meeting were not approved because there was not a quorum present. Due to the lack of a quorum, this meeting was an informational meeting.

The Waste Area Grouping (WAG) 6 presentation was the first item on the agenda. This presentation was made by Bryan Clayton.

The second item on the agenda was a presentation on WAG 22 by Bob Pratt.

The next item on the agenda was the Environmental Management and Enrichment Facilities (EMEF) Project Updates. There were no questions on the updates.

The next item on the agenda was the Federal Facilities Agreement (FFA). The FFA is out for public comment through June 20, 1997. At this time no comments have been received. Mark Donham felt that everyone on the board should get a copy of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) document. Mark asked if there were alternative remedial actions included in the FFA. Tuss Taylor stated that they are located in the appendix (the Site Management Plan). Mark asked where the authority for combining the Resource Conservation and Recovery Act (RCRA) and CERCLA came from. Carl Froede stated that basically what happens is that the Environmental Protection Agency (EPA) and State get together and determine this. It is a negotiated agreement between the two regulatory agencies (State and EPA). This is all documented in the FFA. The FFA is an enforcement document. Mark asked if the

applicable or relevant and appropriate regulations (ARARs) have been established. Carl stated that they are essentially all the laws that deal with the remedial decision. That process is identified in the FFA. The question was brought up if the SSAB was going to submit their comments individually or as a board. The board has until the June meeting to submit as a board. The FFA will go back on the agenda. Carlos Alvarado stated that if the Department of Energy (DOE) is notified that there are comments going to be submitted that it would be okay if they were a little late. Mark stated that he would type up his comments and submit to the board to see if they had any additional comments.

The next item on the agenda was the membership drive. Jimmie Hodges stated that the two new names have been submitted to Oak Ridge to be processed through Headquarters. It was asked how long it would take. Jimmie stated that they would try to push the applications along. Nola Courtney stated that four more applications had been received. These applications will be sent to the board members not present along with the meeting minutes. The membership drive will be on the next agenda.

A videoconference on the 10 Year Plan was held on May 21, 1997. This videoconference with Al Alm included all SSAB sites. Paducah did not get to speak because they ran out of time. Mr. Alm will be making a tour of the major sites in early June to interact with the stakeholders. Workshops, etc., will be held this summer to encourage participation. The final draft 10 year plan is to be released in September. There have been many complaints on the tardiness of the plan. The 10 year plan is now called the Accelerated Cleanup Plan. Everyone will receive copies of the plan, possibly before the next meeting. It was suggested that the board ask Al Alm to come to Paducah. Steve Kay suggested that the co-chairs might take the action to invite Al Alm since there was a lack of a quorum. Several suggestions were made on actions to be taken: 1) Invite Al Alm to Paducah. 2) The SSAB travel to Oak Ridge. 3) Co-chairs draft invitation to come to Paducah. 4) Dialogue with Program People.

The next item on the agenda was the Draft Work Plan. Mark Donham went through the Administrative Record and has reviewed the documents. Mark felt that the board needed a presentation on groundwater and alternative technologies. At this time, he has not completed a workplan. Vicki Jones stated that she would discuss with Mark some generic areas to be put on the workplan. Steve Kay felt that the board needs something in writing.

Annette Hayden's retirement announcement was the next item on the agenda. The Waste Management ex-officio position is an appointed position. Annette made the suggestion that Tuss Taylor with the University of Kentucky Federal Facilities Oversight Unit replace her. Rob Daniell, the Waste Management Director was in agreement with this suggestion. Jimmie stated that there might be some conflict, but this would be addressed.

The final item on the agenda was a request to be placed on the agenda by Julie Watts of the ATSDR. It was agreed to allow her to be placed on the agenda.

The next meeting will be held on June 19, 1997, at the Heath High School at 6:00 p.m. The meeting was adjourned.

**Tentative Agenda for the June 19, 1997, meeting:**

**Minutes**

Northeast Plume Presentation

Presentation on Drum Mountain

Presentation by Julie Watts of the ATSDR

EMEF Project Updates

FFA Update

Membership Update

Review of the 10 Year Plan

Draft Work Plan

**Action Items**

Co-chairs will work on Workplan

Co-chairs will work on letter inviting Al Alm to come to Paducah

Jimmie Hodges will provide Executive Summary to WAG 6 and WAG 22 documents

**MEMORANDUM  
SITE SPECIFIC ADVISORY BOARD**

**TO:** Distribution

**FROM:** Mark Donham  
Vicki Jones

**DATE:** June 3, 1997

**SUBJECT:** MAY 22, 1997, MEETING MINUTES

Attached are the subject meeting minutes. The next meeting will be held June 19, 1997, at the Heath High School at 6:00 p.m. Please review and provide comments or changes at the June meeting.

SSAB Distribution List

Nola Courtney  
Mark Donham  
Tommy Fletcher  
David Fuller  
W. G. Harvey, Sr.  
Vicki Jones  
William L. Kressenberg  
Ronald Lamb  
Linda Long  
Connie J. Sykes  
Gregory Waldrop

Ex Officio Distribution List

Wayne Davis  
Carl Froede, Jr.  
Annette Hayden  
Jimmie C. Hodges  
John A. Volpe

PADUCAH GASEOUS DIFFUSION PLANT (PGDP)  
SITE SPECIFIC ADVISORY BOARD (SSAB)

**DRAFT**

Meeting Minutes

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**PADUCAH GASEOUS DIFFUSION PLANT SITE SPECIFIC ADVISORY BOARD  
U.S. DEPARTMENT OF ENERGY  
ENVIRONMENTAL MANAGEMENT & ENRICHMENT FACILITIES  
PROJECT UPDATE  
MAY 22, 1997**

**ENVIRONMENTAL RESTORATION**

**Northwest Plume Interim Remedial Action**

More than 160 million gallons of water have been treated at the Northwest Plume Groundwater Treatment Facility since operations began Sept. 1, 1995. The facility operates to contain a high contamination zone of the degreaser trichloroethylene and the man-made radionuclide technetium-99.

March and April activities include continued remedial operations (water extraction and treatment) and routine operation and maintenance of facility. The facility has been in operation 96 percent of the time from August '96 to December '96.

The Pilot Phase of operations ends per the project schedule on May 31, 1997. DOE will determine the transition to ongoing operations.

**Northeast Plume Interim Remedial Action**

The Northeast Plume project involves the installation of extraction wells in the northeast quadrant of DOE property with an underground pipeline running to the existing PGDP cooling towers as part of a newly completed treatment system.

This regional gravel aquifer's contamination comes solely from the degreaser trichloroethylene.

Routine operations began in March 1997, with more than 14 million gallons of groundwater treated to date.

A small drip was noted on May 1, 1997, from the above ground piping insulation on the equalization tank effluent line. A catch bucket was installed. The drip may be the result of rain water infiltrating into insulation and then slowly leaking out. The drip is being monitored during dry weather to determine its origin.

**Lasagna demonstration**

The Lasagna soil remediation technology now being tested at PGDP works by using buried electrodes to move water through contaminated soil. Applied current drives the water an inch a day from a positive to a negative electrode. Along the way, the water picks up contaminants from the soil which are removed by treatment zones containing iron filings.

Phase IIA installation was completed in August 1996 and the process was operational through Feb. 26, 1997, with post-demonstration sampling completed the week of March 3, 1997.

DOE EM-50 has granted the Lasagna consortium another extension of the Phase IIA project and the system will operate until August 1997.

If full-scale remediation is undertaken, the remediation will be funded by EM-40 (the office of the Deputy Assistant Secretary for Environmental Restoration), which funds the remainder of Paducah's Environmental Restoration and Waste Management program. A Proposed Plan and Record of Decision schedule with a final ROD targeted for October 1997 has been postponed due to the extension of the test. An overview of the schedule will be provided to the SSAB when finalized.

### **Waste Area Groups 1 & 7/C-746-K Landfill, Kentucky Ordnance Works**

WAG 1 consists of a fire training area, the plant sewage treatment facility and a known trichloroethylene spill site inside the PGDP security fence. WAG 7 consists of five underground storage tanks at the plant water treatment facility, and an inactive sanitary landfill outside the security fence. Three SWMUs are connected with the former Kentucky Ordnance Works (KOW) and are located on the DOE reservation. They are the KOW sewage treatment facility, a known Toluene spill site and a burn area.

The original proposed plan included the preferred alternative of a constructed wetland system to treat leachate at the landfill, which contains fly ash and other miscellaneous materials. The Kentucky Division of Water disagreed with the treatment option because it involved the treatment of leachate in the waters of the Commonwealth. The revised proposed plan includes continued groundwater monitoring and deed restrictions in the preferred alternative.

A draft remedial design was sent to DOE April 1, 1997 and comments were received April 8, 1997. Comments were incorporated prior to submission to regulators on April 16, 1997. This design may be modified as a result of a recent discovery.

On Tuesday, April 29, 1997, LMES discovered that the recent heavy rains and subsequent flooding had caused the vegetative cover over the landfill cap to sluff into the Bayou Creek. Approximately 635 ft.<sup>3</sup> of soil has failed and is in danger of being placed into the creek if a significant rainfall occurs. The sluffing has exposed the surface of the landfill cap in an area approximately seven feet tall by 32 feet wide. The integrity of the cap has been maintained. Geotechnical borings are being taken to determine the material below the clay cap in this area.

### **Waste Area Group 3/burial grounds**

WAG 3 is composed of three burial grounds within the PGDP security fence. The FY 97 scope of this project include the development of a work plan scoping document and work plan. The draft scoping document was submitted to the regulators on March 27, 1997.

### **Waste Area Group 6/Trichloroethylene spill site**

The C-400 TCE spill site is a major source of TCE in the groundwater and soil. The Industrial Hydrogeologic Study focused on piping, utilities and building foundations in the C-400 building area to determine how these man-made structures and systems influence groundwater infiltration and flow.

The data from this investigation was used to prepare a WAG 6 Remedial Investigation Work Plan, which was submitted to the regulatory agencies in August, 1996. The plan focuses on contaminant distribution and movement. A Treatability Study Program Plan to identify needed treatability studies to collect data necessary to remediate contaminants expected to be found during the investigation is being developed, and was submitted to the regulatory agencies by Nov. 26, 1996.

Comments on the WAG 6 Remedial Investigation/Feasibility Study were received from the regulatory agencies in November, 1996, and resolution of those comments has been completed. A second draft work plan was submitted Jan. 20, 1997. The Commonwealth has not approved the work plan for implementation. Approval was due March 14, 1997. Field work is being planned for summer 1997.

### **Waste Area Groups 9 & 11**

WAGs 9 & 11 are composed of seven below ground liquid containment vessels.

The scope of work for this project includes development of an SAP, field sampling and development of a Site Evaluation Report.

Documents were submitted to KDEP on Feb. 28, 1997, with a request for comments by March 21, 1997. No comments have been received.

#### **Waste Area Group 17/Rubble piles**

The piles of concrete rubble that make up Waste Area Grouping 17 have been investigated for contamination. The rubble, derived from demolition of sidewalks, parking lots and other concrete structures at PGDP during the 1970s, was used as construction material in the Ballard County Wildlife Management area, McCracken County Wildlife Management Area and on Department of Energy property.

A small amount of contaminated material was removed from SWMU 124 in 1996. After further sampling, an additional removal action at this SWMU is scheduled for April 1997.

A Remedial Investigation Report was submitted to the state and EPA on Nov. 9, 1996, and a briefing was given to regulatory agencies Nov. 20. The DOE position, based on the results, is no further action at the remaining rubble piles. Regulatory agencies have commented, and proposed resolution of those comments were provided to EPA and state regulators Feb. 26, 1997. A teleconference to discuss resolution of comments is planned for this month. A second draft Remedial Investigation report was delivered to the agencies earlier this month.

The public will have an opportunity to comment on the Proposed Plan for WAG 17 from May 26 - July 9, 1997. A public meeting is tentatively scheduled to be held June 17 at the Lockheed Martin Energy Systems facility in Kevil.

#### **Waste Area Group 22/Burial grounds**

This project includes the investigation of burial grounds in the northwest corner of the plant (SWMUs 7 & 30) and in the west-central portion of the plant (SWMU 2). Original plans included installation of a cap at SWMU 2, the C-749 Uranium Burial Ground, but investigation activities have determined that the buried material was saturated in the water table, indicating a cap would have limited effect.

A Data Summary Report, summarizing and evaluating data collected during investigation activities, is being prepared and was provided to the regulatory agencies in February.

The development of a Remedial Investigation Report is ongoing at SWMUs 7 & 30 (the C-747-A Uranium Burial Ground and C-747-A Burn Area). This RI report is to be submitted to the regulatory agencies in July, 1997.

#### **Waste Area Group 23/Polychlorinated Biphenyls (PCBs) Spill Sites**

Past use of PCBs and subsequent accidental spills and leaks of oils that contain PCBs caused surface soil contamination at several Solid Waste Management Units inside the PGDP security fence.

A Proposed Plan was issued in June 1996 for a 45-day public comment period. The preferred option in that plan was the excavation and treatment of the soil containing PCBs greater than 25 ppm using a thermal treatment technology known as vitrification. This process destroys organics, such as PCBs, and produces a glass which will bind any radioactive compounds.

The DOE will seek public comment on an Engineering Evaluation/Cost Analysis Summary (EE/CA Summary) for the cleanup of PCB sites. The summary describes the Non-Time-Critical Removal Action that DOE is considering to clean up the PCB contamination. DOE is proposing the excavation and temporary on-site storage of the contaminated soil. The focus of this removal action is the elimination of potential risk to workers from contact with contaminated soil. The final disposition of the contaminated soil would be determined at a later date, consistent with applicable

laws and regulations, including appropriate public participation.

A 30-day public comment period on the EE/CA Summary has been set to begin June 2, 1997. Following the public comment period, DOE will prepare an Action Memorandum for the selected action.

#### **Waste Area Group 27/Potential trichloroethylene sources**

WAG 27 consists of potential or known sources of TCE on the west side of the Paducah Gaseous Diffusion Plant. A second draft Remedial Investigation/Feasibility Study Work Plan is being developed for submittal to regulatory agencies on June 2, 1997.

Comments on the draft work plan have been received from the EPA, and a partial set of comments have been received from the Commonwealth of Kentucky. Resolution of comments is underway, with response due 60 days after receipt of final comments from the state.

#### **Vortec Vitrification Project**

The Vortec project is currently the subject of litigation.

#### **Federal Facility Agreement (FFA)**

Under CERCLA, a Federal Facility Agreement is required between the state, EPA and DOE to set forth guidelines on how the site cleanup is to be managed.

The FFA has been approved by DOE, state and federal regulators and will be issued for public comment within a few days.

#### **PGDP Decontamination and Decommissioning Program**

The D&D program is designed to provide surveillance and maintenance (S&M) of DOE facilities no longer in use. The S&M activities are performed to ensure protection of human health and the environment, and compliance with environmental regulations. The two facilities currently in the program are the C-340 Metal Reduction Facility and the C-410 Feed Plant.

S&M activities include inspections, monitoring activities, housekeeping, preventive maintenance and making repairs. Also, some preliminary scoping and engineering work is being done in preparation for final disposition of those structures.

So far in April a total of 318 pallets and 694 cubic feet of loose wood have been removed from the C-410 complex. Work continues to prepare fluorine cells and spare equipment for transfer to a separate government agency.

#### **Drum Mountain Scrap Removal**

Drum Mountain must be moved from its present location before Oct. 1, 1998 to support Remedial Action activities at the Northwest Corner burial yards. Planning for this project consists of developing a project plan to identify the most cost-efficient method of packaging the wastestream.

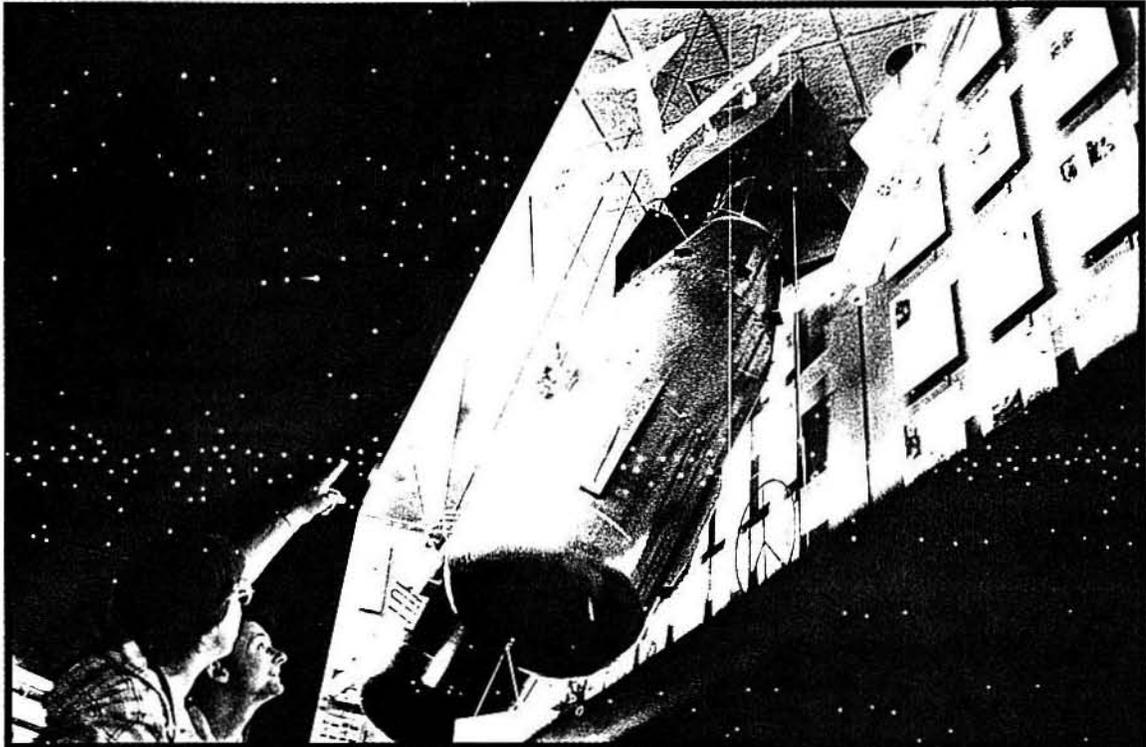
After it is packaged, the waste will be moved to a staging area in preparation for future off-site shipment. Waste characterization will determine if the waste meets the acceptance criteria for Envirocare of Utah, the facility selected to receive the waste.

A project plan and statement of work have been drafted, and are under internal review and comment. A project plan is due to DOE for review on June 30, 1997. A cost benefit analysis and a Waste Characterization plan are being developed.

This approach will require \$4 million in Fiscal Year 1998 not presently identified. DOE and LMES need to locate funding in the Oak Ridge program.

# LINKING LEGACIES

**Connecting the Cold War  
Nuclear Weapons Production Processes  
To Their Environmental Consequences**



Application Form for the  
Paducah Gaseous Diffusion Plant  
Site Specific Advisory Board

Name: Edward Duff

Mailing Address: 5734 Old 45 Telephone: (H) 554-7776  
Paducah, Ky. 42003 (W) \_\_\_\_\_

Category: The Selection Panel for the PGDP Site Specific Advisory Board seeks a Board that will reflect a full diversity of views in the affected community and region. Please indicate any category(ies) to which you belong.

- McCracken Co. public official
- Ballard Co. public official
- business person
- OCAW 3-550 member
- organized labor, other than OCAW
- ethnic minority
- environmental activist *of sorts*
- agricultural interests
- PGDP contractor, subcontractor
- health professional
- public school representative
- PGDP plant management
- recreational user of West Kentucky Wildlife Management Area
- non-employee plant neighbor (3 mi. radius)
- PGDP employee (non-management/non-union)
- other \_\_\_\_\_

Describe your past interest public information activities, if any, in PGDP:

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**Employment:**

Occupation: Machinist retired

Is your employment or employer related to the PGDP? (if so, please explain):

No.

**Your Contribution:**

Please describe why you want to serve on the PGDP Site Specific Advisory Board:

as a public service, one of my interest

What qualities do you bring to the Advisory Board and its activities?:

retired employe of Allied-Signal Co.  
Metropolis, Ill. uranium processing plant.

Please list all technical, professional, and other specializations:

Past officer in the O. A. W. and  
International association of Machinists and  
Loyal order of the Moose and Boy Scout scoutmaster.

**Diversity: (OPTIONAL)**

The Selection Panel desires a Site Specific Advisory Board with diverse representation.

Please list those characteristics you have that would diversify the SSAB: \_\_\_\_\_

Interest in the welfare of our country

Please read the following statements. An application will not be considered unless both statements are signed and dated.

**Conflict of Interest:** Individuals and organizations that stand to realize a direct financial gain or unfair competitive edge from SSAB decisions are deemed to have a "conflict of interest." To the best of my knowledge, my membership on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board would not pose a conflict of interest.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Membership Commitment:** If selected to serve on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board, I agree to attend training and Advisory Board meetings, review background materials, and work cooperatively within the Advisory Board.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

You may attach additional information in support of your application: Feel free to comment on the application process. Applications must be postmarked no later than March 30, 1997, and mailed to the following address: The SSAB Selection Panel, c/o Nola Courtney, 14299 Wickliffe Road, Kevil, Kentucky 42053.

**Application Form for the  
Paducah Gaseous Diffusion Plant  
Site Specific Advisory Board**

Name: EDDIE GRAY II

241 Reid Circle  
Paducah, Ky 42003

Mailing Address: \_\_\_\_\_

Telephone: (H) 898-8083  
(W) 441-6246

Category: The Selection Panel for the PGDP Site Specific Advisory Board seeks a Board that will reflect a full diversity of views in the affected community and region. Please indicate any category(ies) to which you belong.

- |   |  |
|---|--|
| <input type="checkbox"/> McCracken Co. public official  | <input type="checkbox"/> Ballard Co. public official |
| <input type="checkbox"/> business person  | <input type="checkbox"/> OCAW 3-550 member           |
| <input type="checkbox"/> organized labor, other than OCAW   | <input type="checkbox"/> ethnic minority             |
| <input type="checkbox"/> environmental activist   | <input type="checkbox"/> agricultural interests      |
| <input type="checkbox"/> PGDP contractor, subcontractor   | <input type="checkbox"/> health professional         |
| <input type="checkbox"/> public school representative   | <input type="checkbox"/> PGDP plant management       |
| <input type="checkbox"/> recreational user of West Kentucky Wildlife Management Area              |  |
| <input type="checkbox"/> non-employee plant neighbor (3 mi. radius)                               |  |
| <input type="checkbox"/> PGDP employee (non-management/non-union)                                 |  |
| <input checked="" type="checkbox"/> other <u>United Plant Guard Workers of America, Local 111</u> |  |

Describe your past interest public information activities, if any, in PGDP:

NA \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Employment:**

Occupation: Security / Law Enforcement

Is your employment or employer related to the PGDP? (if so, please explain):  
Police Operations Group, Lockheed Martin

Security Police Officer

**Your Contribution:**

Please describe why you want to serve on the PGDP Site Specific Advisory Board:

As a member of the Security Police Organization, I believe it is  
imperative to inform the community and region of the changes that  
have occurred regarding the protection of the PGDP, and how those  
changes affect the ability of Security Police Officers to perform  
their duties.

What qualities do you bring to the Advisory Board and its activities?:

I hope to convey the importance of a viable Security Police Organization,  
and how our organization can work with the community to help it become  
a better (safer) place to live and work! I will work diligently with all  
members to successfully see this Advisory Board be a success!  
Please list any technical, professional, and other specializations:

United States Air Force Security Police

Lockheed Martin Security Police

McCracken County Sheriff's Department, Tactical Response Team Member

Will graduate from Paducah Community College, Summer 1997

Actively pursuing a degree from Murray State University, Criminal Justice.

**Diversity: (OPTIONAL)**

The Selection Panel desires a Site Specific Advisory Board with diverse representation.

Please list those characteristics you have that would diversify the SSAB: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please read the following statements. An application will not be considered unless both statements are signed and dated.

**Conflict of Interest:** Individuals and organizations that stand to realize a direct financial gain or unfair competitive edge from SSAB decisions are deemed to have a "conflict of interest." To the best of my knowledge, my membership on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board would not pose a conflict of interest.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Membership Commitment:** If selected to serve on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board, I agree to attend training and Advisory Board meetings, review background materials, and work cooperatively within the Advisory Board.

Signature: Eddie E. Jean

Date: 4-17-97

You may attach additional information in support of your application: Feel free to comment on the application process. Applications must be postmarked no later than March 30, 1997, and mailed to the following address: The SSAB Selection Panel, c/o Nola Courtney, 14299 Wickliffe Road, Kevil, Kentucky 42053.

Application Form for the  
Paducah Gaseous Diffusion Plant  
Site Specific Advisory Board

Name: Lynn W. Lane

Mailing Address: P.O. Box 145 Telephone: (H) 502 335-5303  
Wickliffe, KY 40387 (W) 502 335-5168

Category: The Selection Panel for the PGDP Site Specific Advisory Board seeks a Board that will reflect a full diversity of views in the affected community and region. Please indicate any category(ies) to which you belong.

- |  |   |
|--|---|
| <input type="checkbox"/> McCracken Co. public official                               | <input checked="" type="checkbox"/> Ballard Co. public official |
| <input type="checkbox"/> business person   | <input type="checkbox"/> OCAW 3-550 member                      |
| <input type="checkbox"/> organized labor, other than OCAW                            | <input type="checkbox"/> ethnic minority                        |
| <input type="checkbox"/> environmental activist                                      | <input type="checkbox"/> agricultural interests                 |
| <input type="checkbox"/> PGDP contractor, subcontractor                              | <input type="checkbox"/> health professional                    |
| <input type="checkbox"/> public school representative                                | <input type="checkbox"/> PGDP plant management                  |
| <input type="checkbox"/> recreational user of West Kentucky Wildlife Management Area |   |
| <input type="checkbox"/> non-employee plant neighbor (3 mi. radius)                  |   |
| <input type="checkbox"/> PGDP employee (non-management/non-union)                    |   |
| <input type="checkbox"/> other _____   |   |

Describe your past interest public information activities, if any, in PGDP:

As Ballard Co Clerk, I have been clerk of  
Ballard Co Fiscal Court. I have been  
involved with various problems the  
Court has faced + solved during the  
past 20 years - such as closing of  
county landfill, operating the Ambulance  
Service, passing of a County payroll  
tax - to name a few.

**Employment:**

Occupation: Ballard County Clerk

Is your employment or employer related to the PGDP? (if so, please explain):

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**Your Contribution:**

Please describe why you want to serve on the PGDP Site Specific Advisory Board:

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What qualities do you bring to the Advisory Board and its activities?:

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Please list all technical, professional, and other specializations:

member of Ky Co Clerk's Assoc. - alternate representative from our District on legislative Committee - serve on Advisory Committee in Business Dept of Ballard Co. Vocational School - past member of advisory board of Ballard Co. Literacy Council - member of board of Wrathen Museum at Murray State University - past board member of Southern Foundation

**Diversity: (OPTIONAL)**

The Selection Panel desires a Site Specific Advisory Board with diverse representation (Cairo, FL)

Please list those characteristics you have that would diversify the SSAB: \_\_\_\_\_

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Please read the following statements. An application will not be considered unless both statements are signed and dated.

**Conflict of Interest:** Individuals and organizations that stand to realize a direct financial gain or unfair competitive edge from SSAB decisions are deemed to have a "conflict of interest." To the best of my knowledge, my membership on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board would not pose a conflict of interest.

Signature: *Symon W. Lane* Date: 4-24-97

**Membership Commitment:** If selected to serve on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board, I agree to attend training and Advisory Board meetings, review background materials, and work cooperatively within the Advisory Board.

Signature: *Symon W. Lane* Date: 4-24-97

You may attach additional information in support of your application. Feel free to comment on the application process. Applications must be postmarked no later than March 30, 1997, and mailed to the following address: The SSAB Selection Panel, c/o Nola Courtney, 14299 Wickliffe Road, Kevil, Kentucky 42053.

Application Form for the  
Paducah Gaseous Diffusion Plant  
Site Specific Advisory Board

Name: Joseph Craig Knodes

Mailing Address: 5083 Mt. Pleasant Rd. Telephone: (H) (618) 524-2645  
Brookport, IL 62910 (W) (618) 524-3440

Category: The Selection Panel for the PGDP Site Specific Advisory Board seeks a Board that will reflect a full diversity of views in the affected community and region. Please indicate any category(ies) to which you belong.

- |   |  |
|---|--|
| <input type="checkbox"/> McCracken Co. public official  | <input type="checkbox"/> Ballard Co. public official |
| <input type="checkbox"/> business person  | <input type="checkbox"/> OCAW 3-550 member           |
| <input type="checkbox"/> organized labor, other than OCAW                                     | <input type="checkbox"/> ethnic minority             |
| <input type="checkbox"/> environmental activist   | <input type="checkbox"/> agricultural interests      |
| <input type="checkbox"/> PGDP contractor, subcontractor                                       | <input type="checkbox"/> health professional         |
| <input checked="" type="checkbox"/> public school representative                              | <input type="checkbox"/> PGDP plant management       |
| <input type="checkbox"/> recreational user of West Kentucky Wildlife Management Area          |  |
| <input type="checkbox"/> non-employee plant neighbor (3 mi. radius)                           |  |
| <input type="checkbox"/> PGDP employee (non-management/non-union)                             |  |
| <input type="checkbox"/> other <u>Live in Massac County, Illinois; a few miles from PGDP.</u> |  |

Describe your past interest public information activities, if any, in PGDP:

I was born and raised in Western Ky and have always been interested in the history of the PGDP as well as its present activities. Therefore, I've always kept an eye out for any information, public or otherwise, regarding the plant.

**Employment:**

Occupation: High School teacher (Massac County High School)

Is your employment or employer related to the PGDP? (if so, please explain):

**Your Contribution:**

Please describe why you want to serve on the PGDP Site Specific Advisory Board:

I'm interested in PGDP activities and how they affect the region in general as well as Southern Illinois in particular.

What qualities do you bring to the Advisory Board and its activities?:

I've lived in this area for over 20 yrs and have maintained an interest in the PGDP throughout. I've taught close to 10,000 students in both West Ky + So. Ill. during this time so I'm acquainted with a large, diverse number of people here and know many people who work at the plant.

Please list all technical, professional, and other specializations:

I have a knowledge of chemistry (I have a chemistry lab at home).  
I also have some knowledge of environmental issues in the area.

**Diversity: (OPTIONAL)**

The Selection Panel desires a Site Specific Advisory Board with diverse representation.

Please list those characteristics you have that would diversify the SSAB:

I'm well acquainted with a diverse number of professionals in the area and am aware of many of their concerns regarding the economy, the environment as well as other areas involving the PGDP.

Please read the following statements. An application will not be considered unless both statements are signed and dated.

**Conflict of Interest:** Individuals and organizations that stand to realize a direct financial gain or unfair competitive edge from SSAB decisions are deemed to have a "conflict of interest." To the best of my knowledge, my membership on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board would not pose a conflict of interest

Signature: \_\_\_\_\_

*Dennis Hill*

Date: \_\_\_\_\_

*5/1/97*

**Membership Commitment:** If selected to serve on the Paducah Gaseous Diffusion Plant Site Specific Advisory Board, I agree to attend training and Advisory Board meetings, review background materials, and work cooperatively within the Advisory Board.

Signature: \_\_\_\_\_

*Dennis Hill*

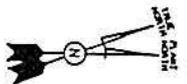
Date: \_\_\_\_\_

*5/1/97*

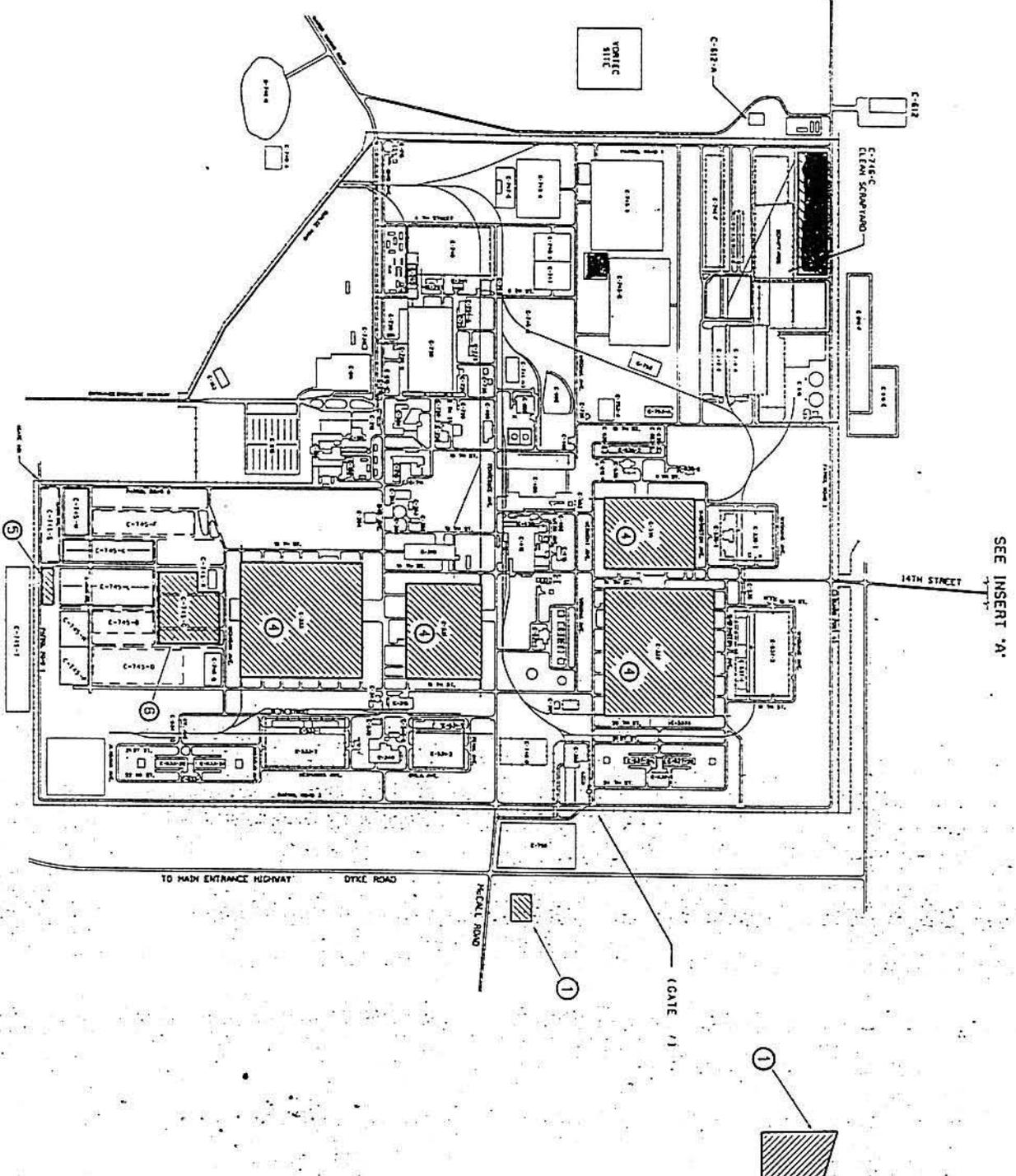
You may attach additional information in support of your application. Feel free to comment on the application process. Applications must be postmarked no later than November 17, 1995 and mailed to the following address: The SSAB Selection Panel, c/o Dennis Hill, Lockheed Martin Energy Systems, 761 Veterans Avenue, Kevil, Kentucky 42053.

**WASTE AREA GROUPING 22  
SOLID WASTE MANAGEMENT UNIT 2  
SOLID WASTE MANAGEMENT UNITS 7 AND 30  
PADUCAH GASEOUS DIFFUSION PLANT  
PADUCAH, KENTUCKY**

**MAY 22, 1997**

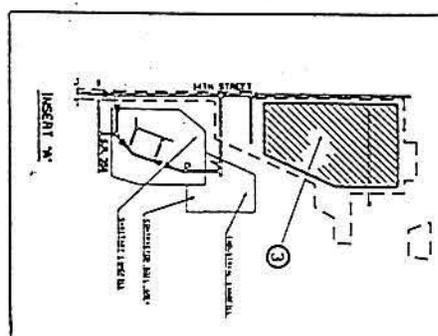


# PADUCAH EM&EF PROJECT LOCATIONS



SEE INSERT 'A'

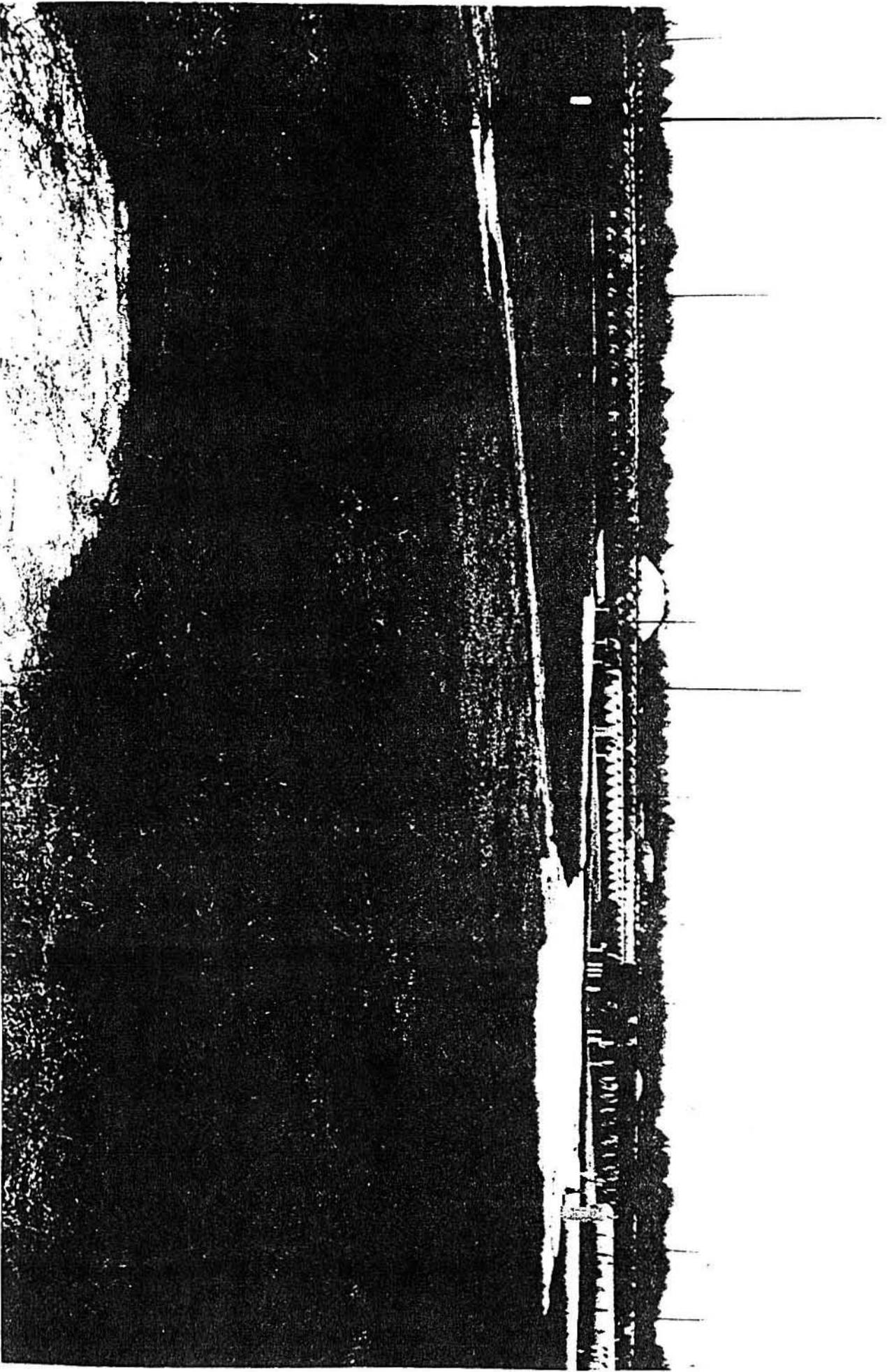
PROJECT NO.	PROJECT DESCRIPTION
1	NORTHEAST PLUME
2	VIA 22
3	SOIL WASTE LANDFILL
4	PCB COLLECTION AND CONTAINMENT
5	CITY LOCKER COATING AREA
6	CITY LOCKER TANKS, PHASE VIII



NO.	DATE	BY	REVISION
1	12/25	...	...
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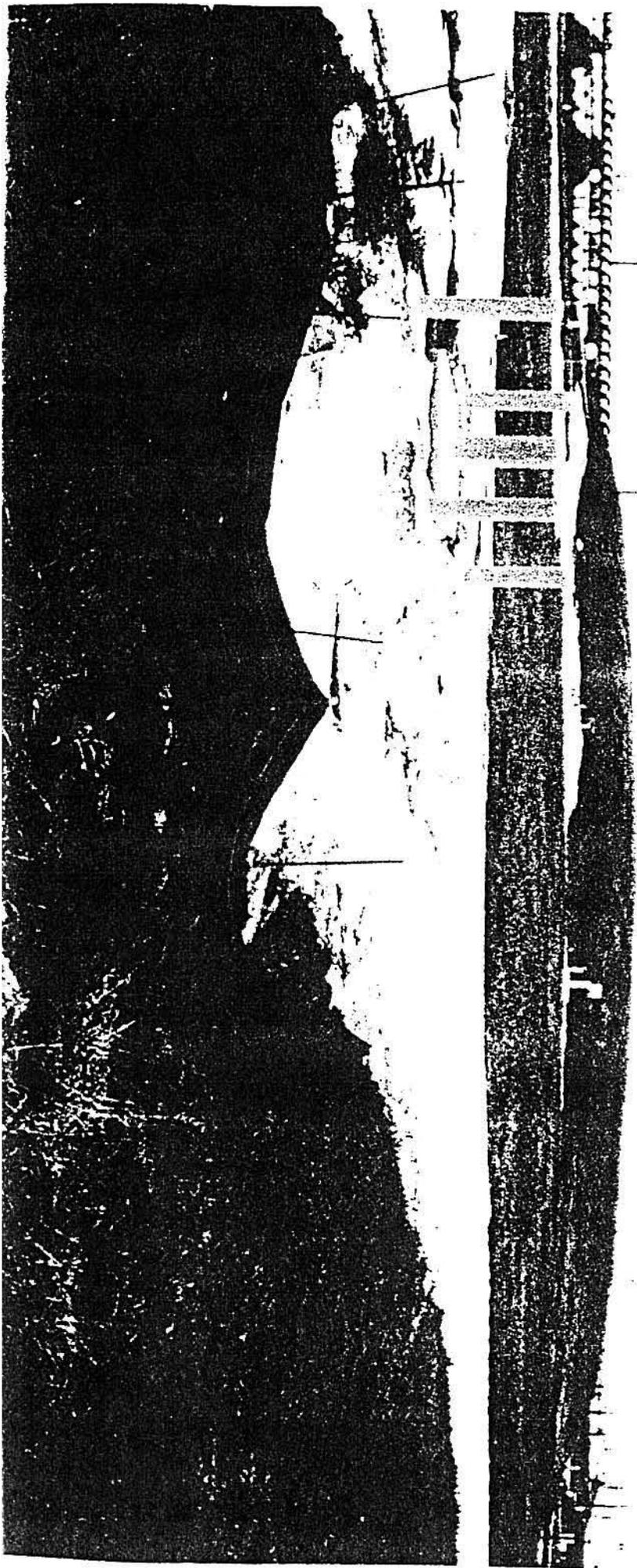
WAG 22

SWMU 2 (C-749 URANIUM BURIAL GROUND)



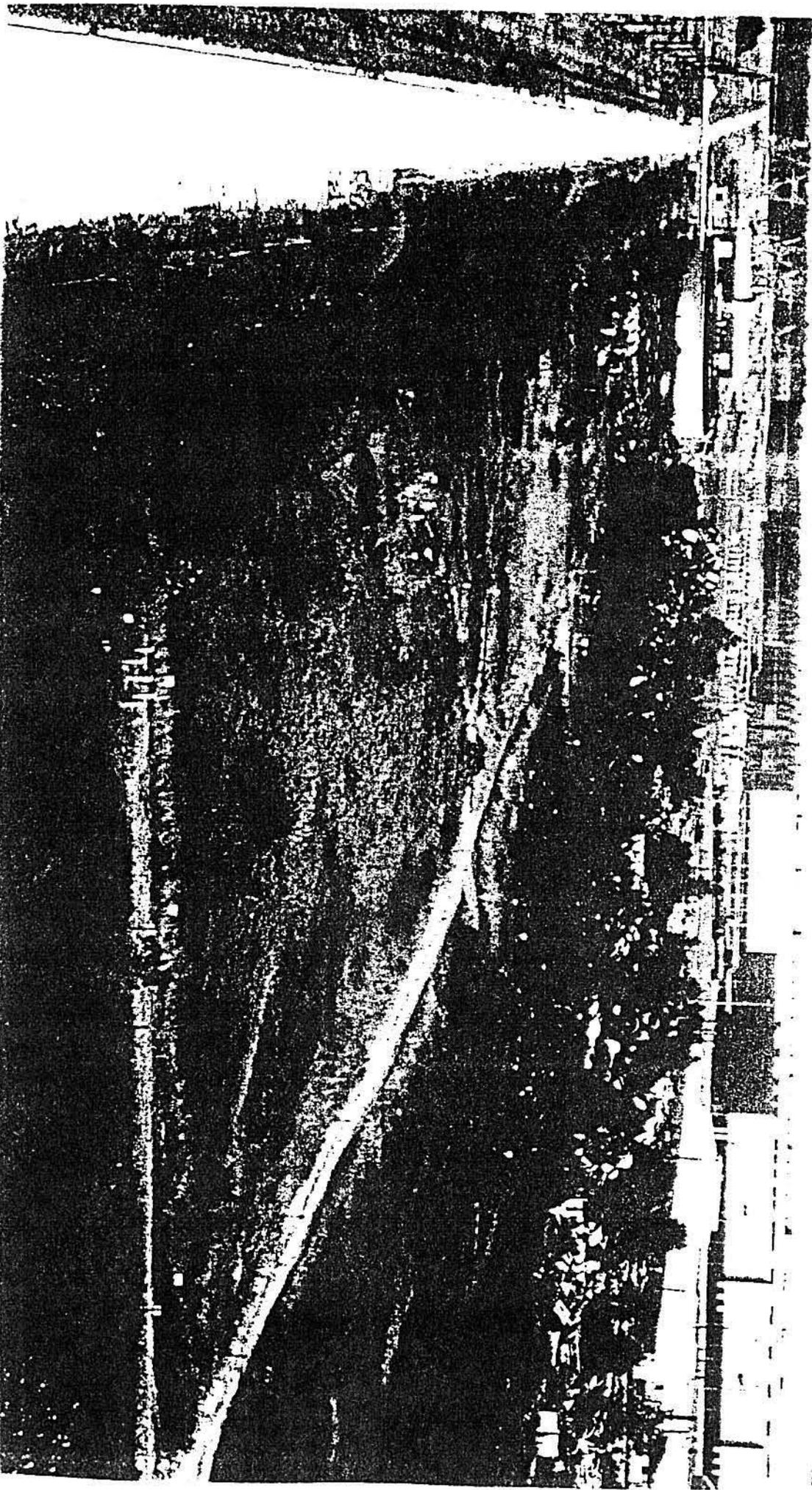
WAG 22

SWMU 2 (C-749 URANIUM BURIAL GROUND)



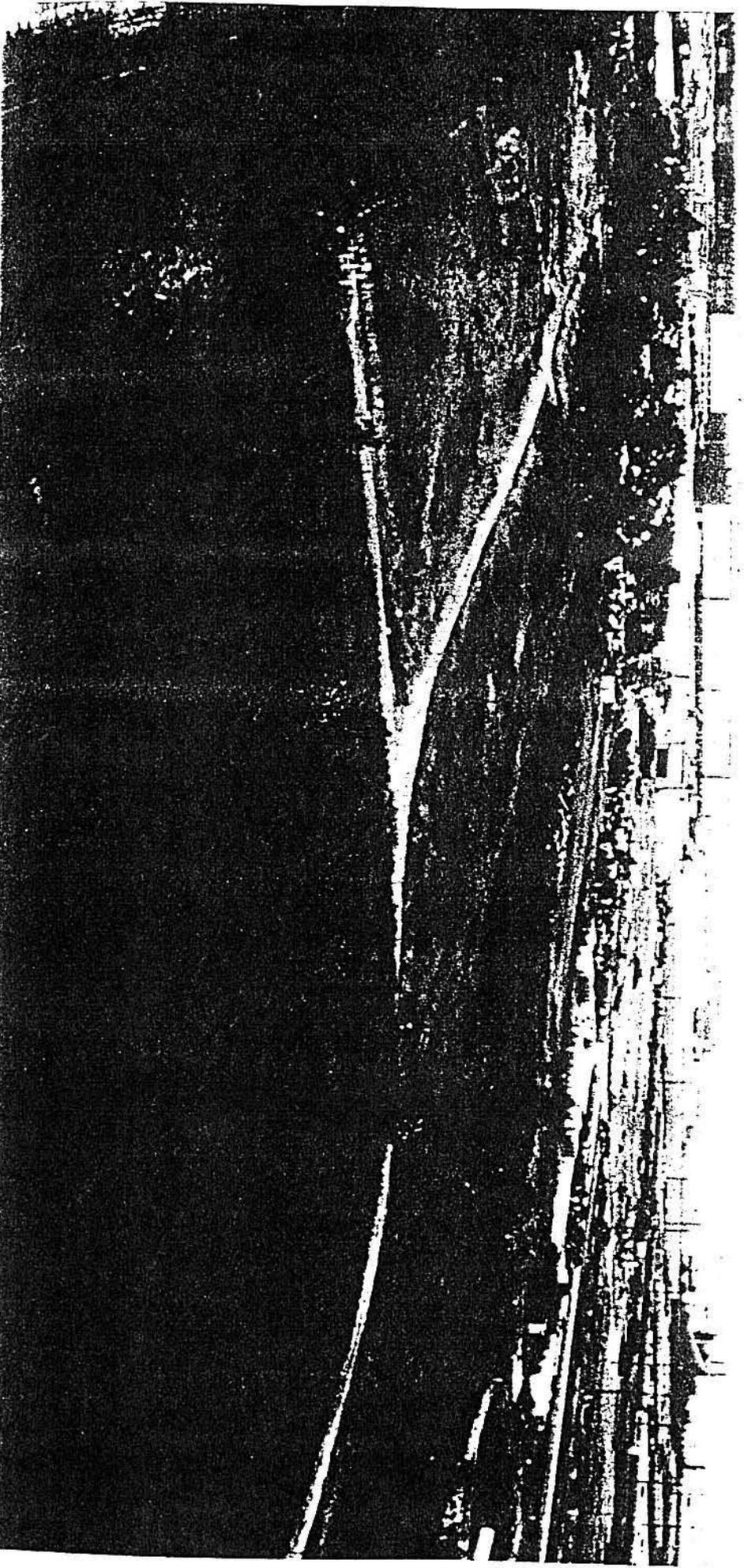
WAG 22

SWMUS 7 (C-747-A BURIAL GROUND)



WAG 22

SWMUS 30 (C-747-A BURN Area)



## **WASTE AREA GROUPING (WAG) 22**

### **SOLID WASTE MANAGEMENT UNIT (SWMU) HISTORY**

SWMU 2: -Size: Appx. 3/4 acre (C-749 Uranium Burial Ground)

-Operation: 1951 - 1977

-Purpose: Uranium (U) & U-contaminated waste disposal.

-Waste placement: 270 tons U & 450 gal. TCE.

-Concern: Waste is believed to be pyrophoric U metal shop turning, shaving, & sawdust.

SWMU 7: -Size: Appx. 5 acres (C-747-A Burial Ground)

-Operation: 1957 - 1979

-Purpose: Disposal of contaminated & uncontaminated trash, equipment, & scrap metal.

-Waste placement: U-contaminated scrap metal, equipment & contaminated concrete scrap.

SWMU 30: -Size: Appx. 3 acres (C-747-A Burn Area)

-Operation: 1951 - 1970

-Purpose: Burning and disposal of uncontaminated combustible trash and potentially U-contaminated trash.

-Waste placement: Ash and burned material.

## C-749-A DESCRIPTION OF BURIED WASTE

- Pyrophoric U from machine shop turnings, shavings, and sawdust from C-720 and C-340 buildings
- U placed in 20, 30, 55 gallon drums with petroleum based or synthetic oils
- Smaller quantities of U oxides, uranyl fluoride, U zirconium alloy, slay,  $UF_4$
- 30 gallon drums of TCE

## C-747-A Burial Ground Description

- Utilized for disposal of contaminated and uncontaminated trash, equipment, and scrap metal between 1957 and 1979.
- Below ground waste located within six burial areas (Areas B through G) excavated down to depths between 6 to 7 feet.
- Sixteen out-of-service autoclave tanks located above ground at southeast corner of unit.
- Ground surface is covered by grassy vegetation except where gravel roads extend through the site.
- Burial areas suspected to be possible sources of uranium, technetium, and trichloroethene.

## C-747-A Burn Area Description

- Utilized for burning of combustible trash between 1951 and 1970, some of which may have been uranium contaminated.
- Ash and debris generated at the SWMU, and from the former C-405 Incinerator, buried within two areas (Area A and an unnamed area).
- Area A excavated to a depth between 10 and 12 feet; depth of unnamed burial area unknown.
- Ground surface is covered by grassy vegetation except where gravel roads extend through the site.
- Burial areas suspected to be possible sources of uranium, technetium, and trichloroethene.

## WAG 22

### INVESTIGATIVE BACKGROUND

#### PHASE I & II SITE INVESTIGATION(SI): (1988 - 1992)

Purpose: Identify SWMUs potentially contributing to off-site contamination.

#### REMEDIAL INVESTIGATION (RI) ADDENDUM: (1991 - 1994)

Purpose: Summarize the Phase I & II SI concerning SWMUs 2, 7, & 30 activities and revise the baseline risk assessment to support production of a SWMU specific risk assessment. During the development of this document additional data were noted as being needed to support the development of an Interim, as well as a final remedial action.

#### FEASIBILITY STUDY (FS), PROPOSED PLAN, & RECORD OF DECISION (ROD) FOR IRA SWMUS 2: (1994 - 1995)

Purpose: Summarize the Phases I & II SI and RI Addendum activities related to SWMU 2, develop Remedial Action objectives and choose a preferred Interim Remedial Action (IRA). The FS addressed data inadequacies and uncertainties as needed to develop and choose the appropriate IRA.

#### SWMUS 7 & 30 SAMPLING AND ANALYSIS PLAN: (1994 - 1995)

Purpose: Gather Data.

#### SWMU 2 SAMPLING AND ANALYSIS PLAN FOR IRA DESIGN: (1995 - 1996)

Purpose: Gather Data.

#### SWMU 2 - DATA SUMMARY & INTERPRETATION REPORT: (1996 - 1997)

Purpose: To document recent data collected at SWMU 2 and interpret this information in relation to the goals and objectives of the actions proposed in the Record of Decision for IRA.

**WAG 22**  
**UP-COMING EVENTS**

SWMU 2 DOCUMENTS SCHEDULED FOR ISSUANCE TO REGULATORY AGENCIES:

Draft Feasibility Study - November 1997  
Draft Proposed Plan - May 1998  
Draft Record Of Decision - 1st Quarter FY 1999

SWMUS 7 & 30 DOCUMENTS SCHEDULED FOR ISSUANCE TO REGULATORY AGENCIES:

Draft Remedial Investigation Report - July 1997  
Draft Feasibility Study - December 1997  
Draft Proposed Plan - June 1998  
Draft Record Of Decision - 1st Quarter FY 1999

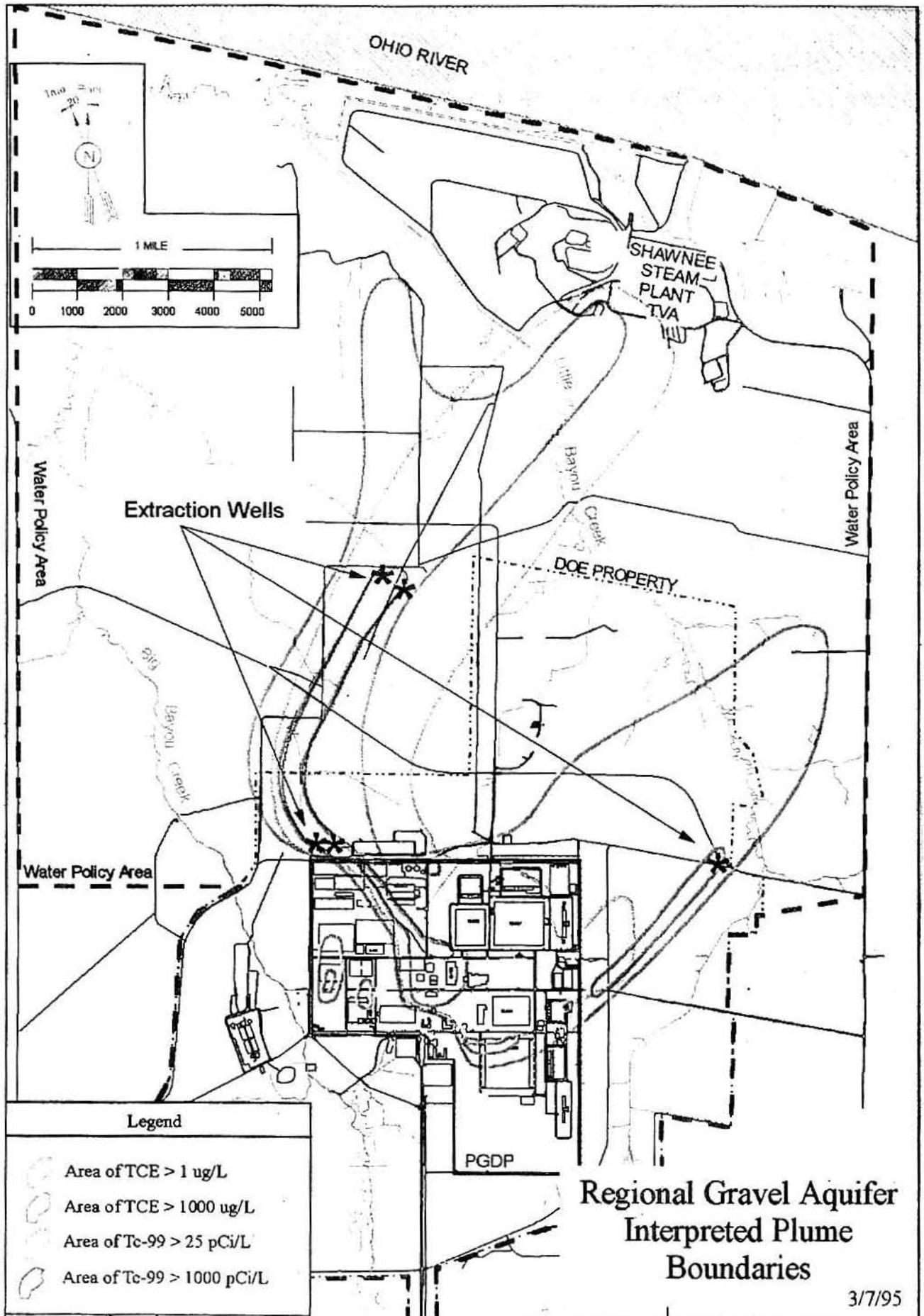
**WAG 6**

**Bryan Clayton**

# WAG 6 REMEDIAL INVESTIGATION

## Project Background

- ◆ November 1988 Administrative Order by Consent signed by DOE
- ◆ Paducah added to National Priorities List in May 1994
- ◆ DOE and Energy Systems hold RCRA and HSWA Permits
- ◆ Off-Site Groundwater Contamination present

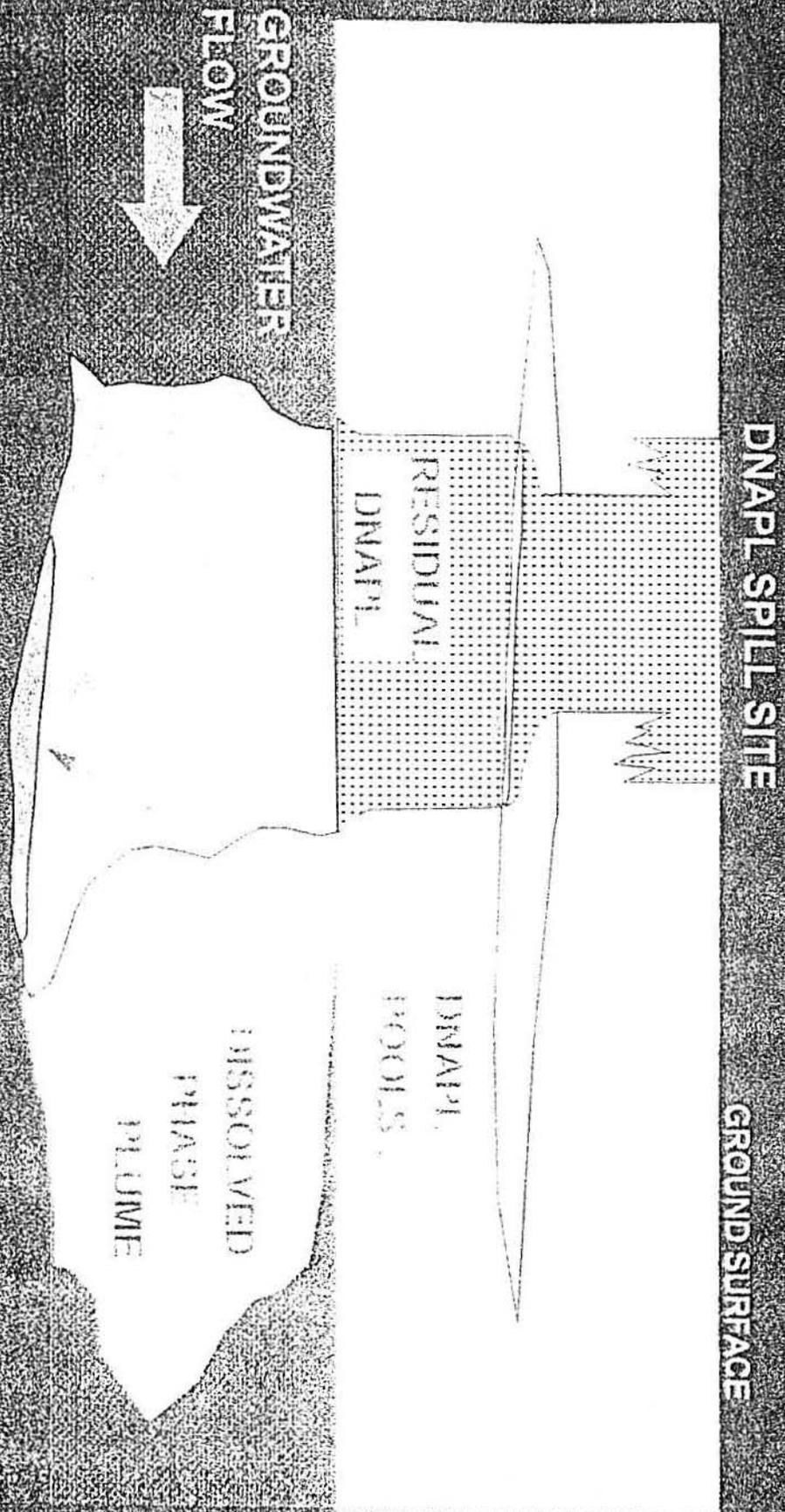


# **WAG 6 Remedial Investigation**

## **Project Goals**

- ◆ **Characterize Nature of Contaminant Source Materials**
- ◆ **Define Nature, Extent and Magnitude of Source Area Contamination in Soils and Groundwater**
- ◆ **Identify and Define Hot Spot Groundwater Contamination and Migration Trends**
- ◆ **Identify Trends of Soil Contamination**
- ◆ **Determine the Presence, General Location, if possible, and Magnitude of DNAPL zones**
- ◆ **Provide Sufficient Information to Support Baseline Risk Assessment Development**
- ◆ **Provide Adequate Data to Analyze Containment Transport and Support FS Development**

# DNAPL



# **WAG 6 Remedial Investigation**

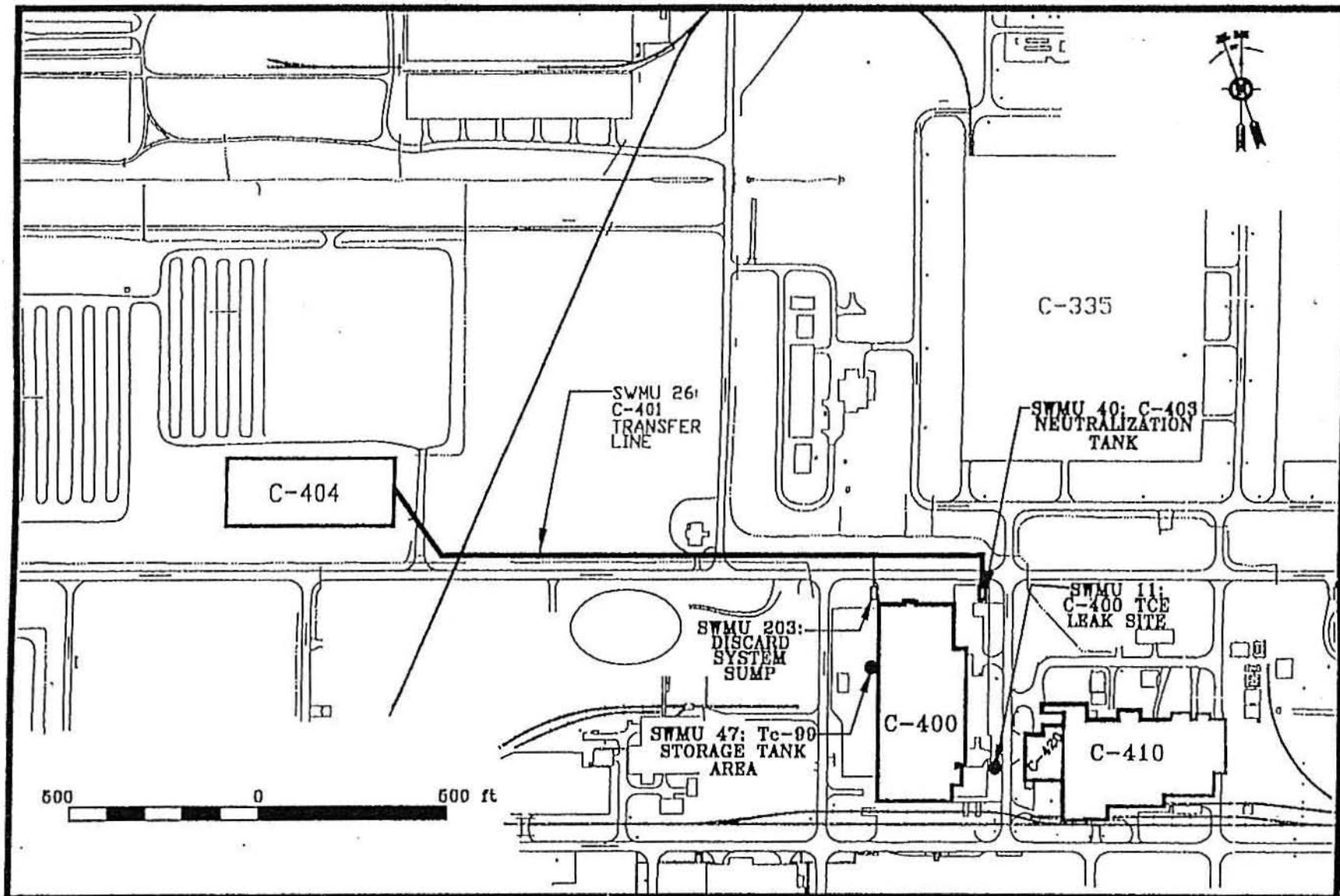
## **Scope**

- ◆ **Developing Remedial Investigation Work Plan**
- ◆ **Developing Treatability Study Program Plan and Treatability Study Work Plans**
- ◆ **Implementing Remedial Investigation**
- ◆ **Implement Treatability Study Work Plans**
- ◆ **Develop D0 and D1 Remedial Investigation Reports**
- ◆ **Develop Treatability Study Report**

# **WAG 6 REMEDIAL INVESTIGATION**

## **WAG 6 Solid Waste Management Units**

- ◆ Trichloroethylene Leak Site (SWMU 11)
- ◆ C-400 to C-404 Underground Transfer Line (SWMU 26)
- ◆ C-403 Neutralization Pit (SWMU 40)
- ◆ Technetium Storage Tank Area (SWMU 47)
- ◆ C-400 Waste Discard Sump (SWMU 203)



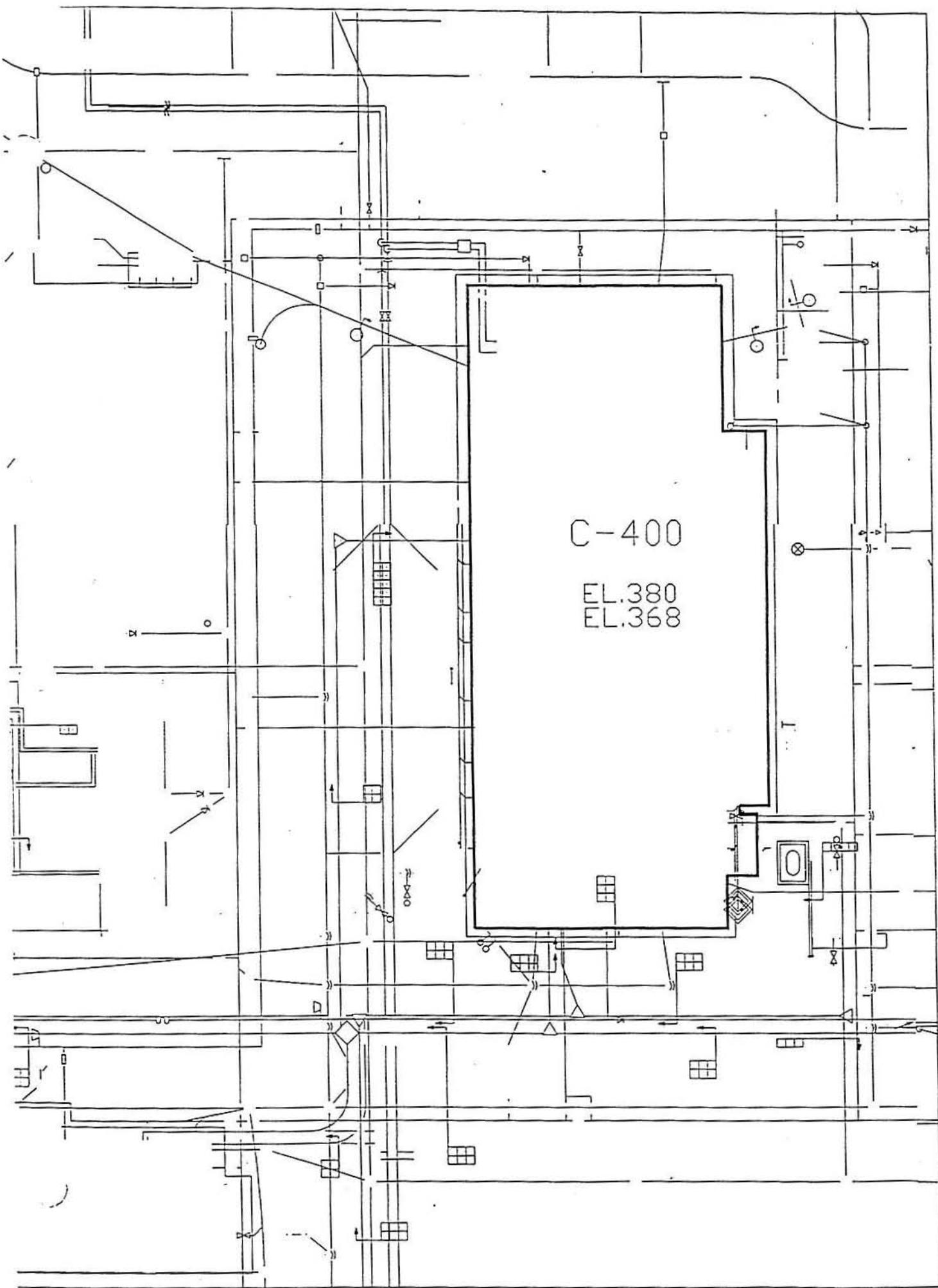
5-2

Fig. 5.1. WAG 6 SWMU location map.

# **WAG 6 REMEDIAL INVESTIGATION**

## **Remedial Investigation**

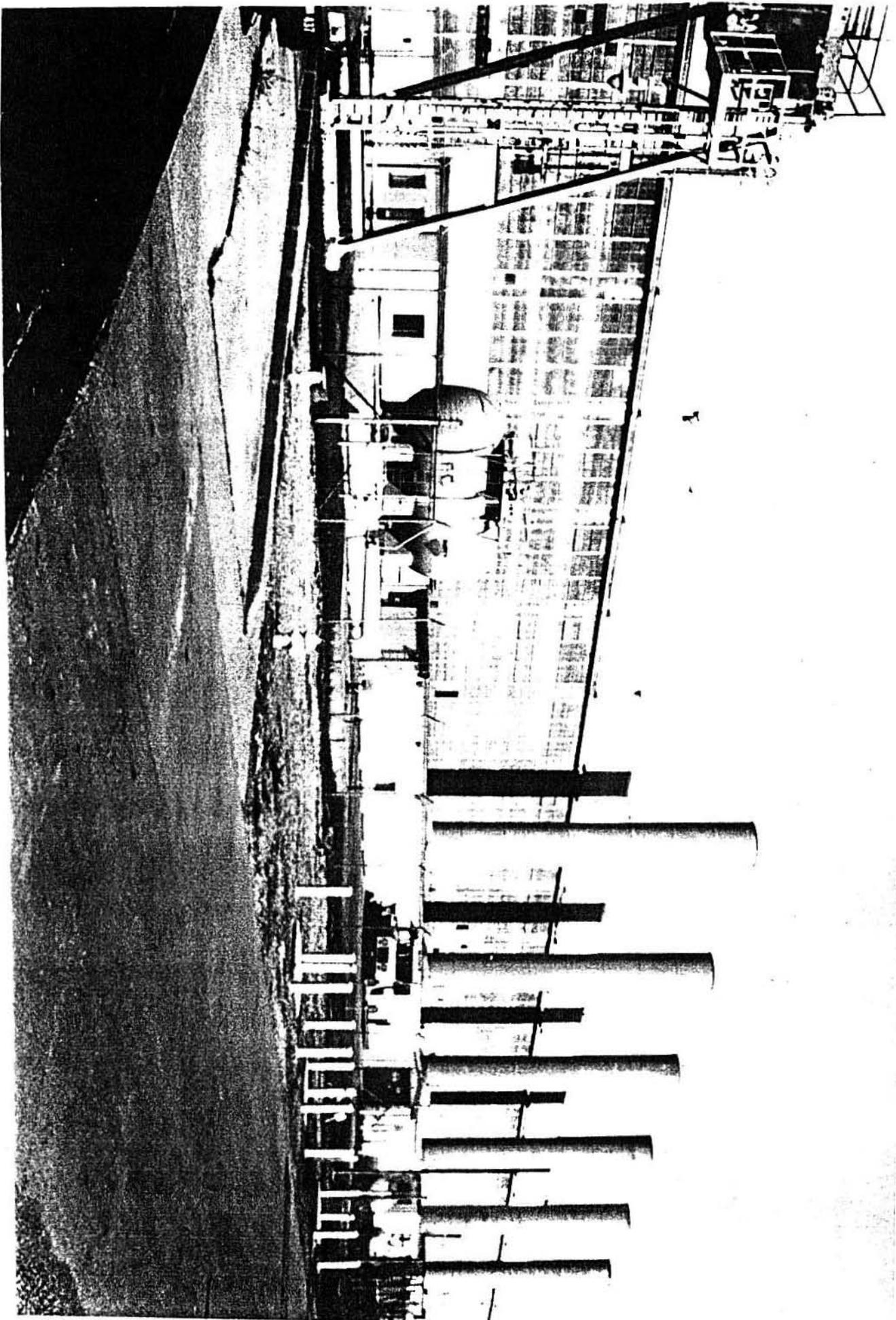
- ◆ **79 Soil Borings to be installed**
- ◆ **167 Soil Samples to be taken**
- ◆ **18 Temporary Piezometers**
- ◆ **7 Ground Water Monitoring Wells to be installed**
- ◆ **198 Soil Gas Probes**
- ◆ **Baseline Risk Assessment Performed**

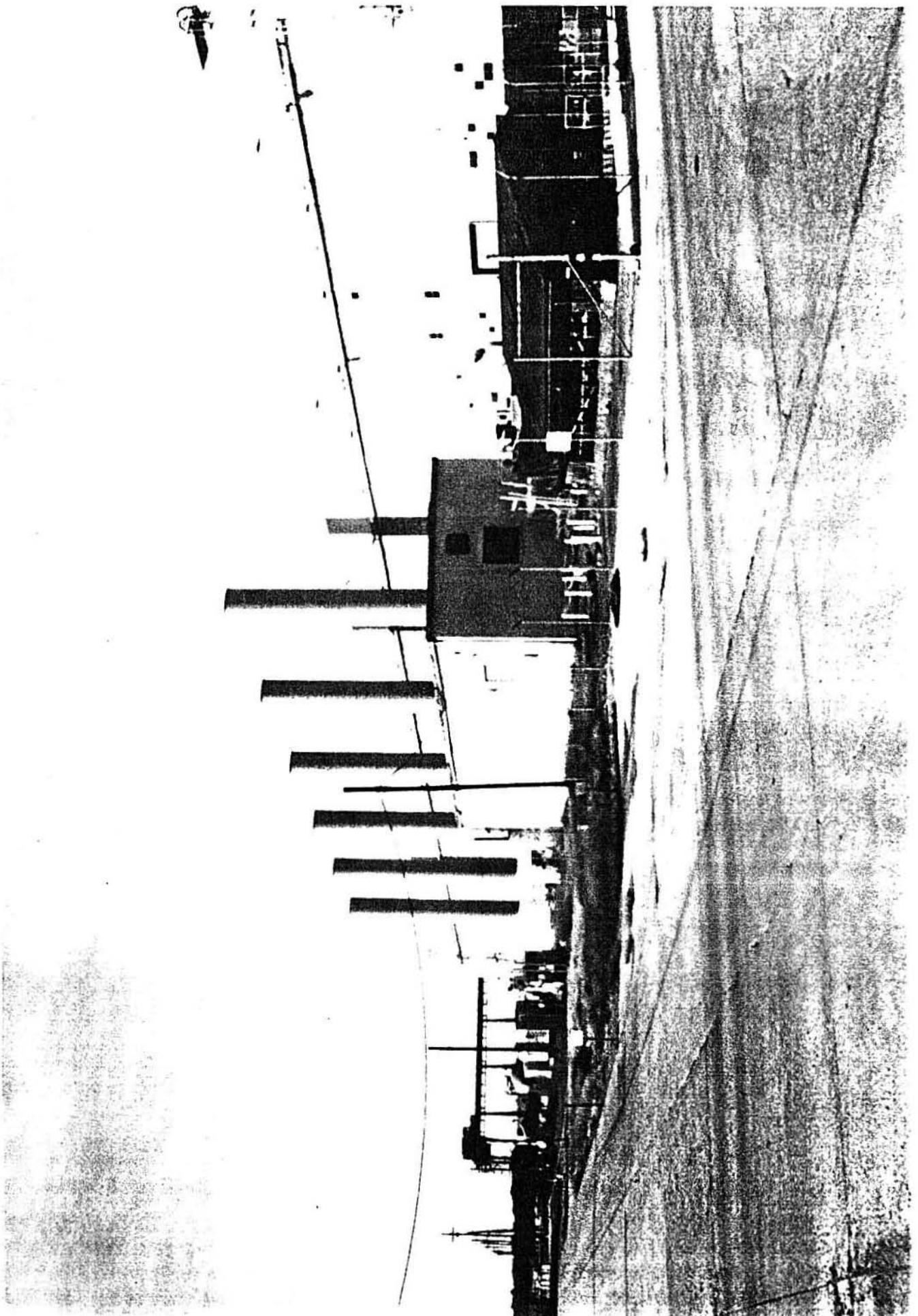


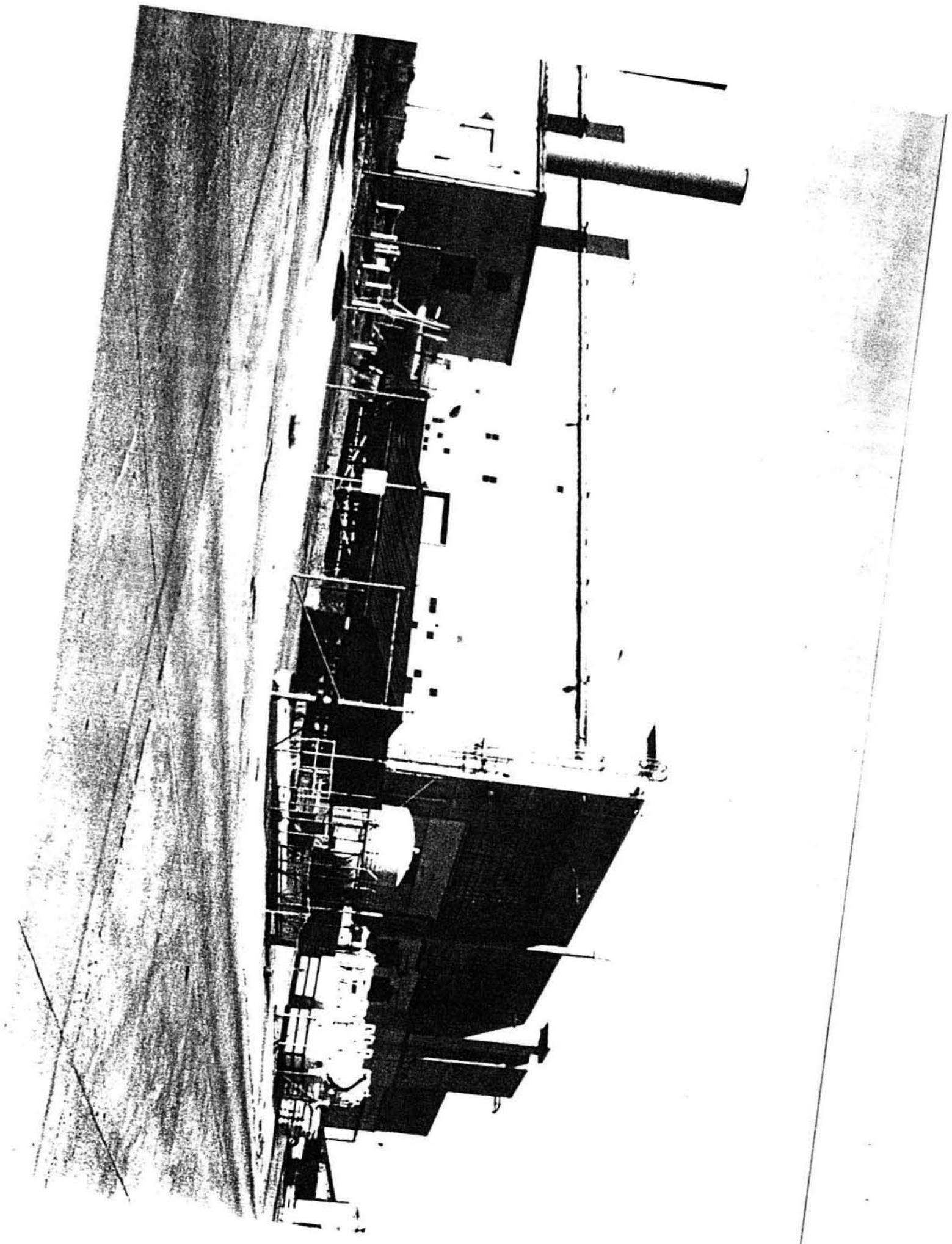
C-400

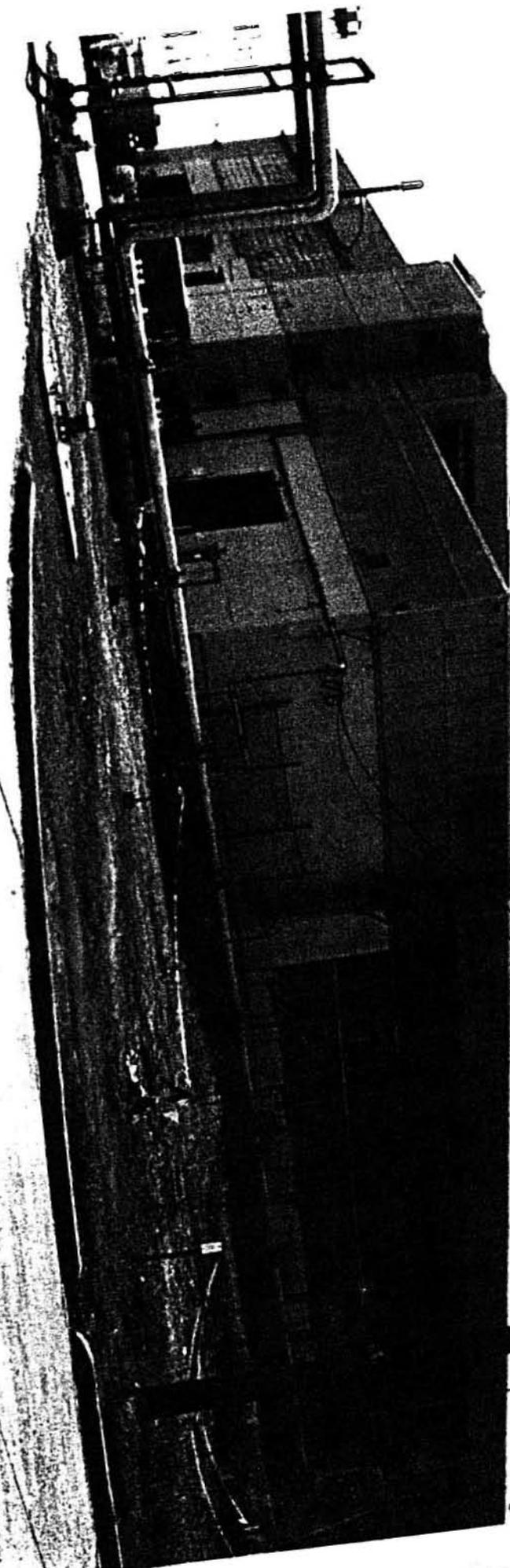
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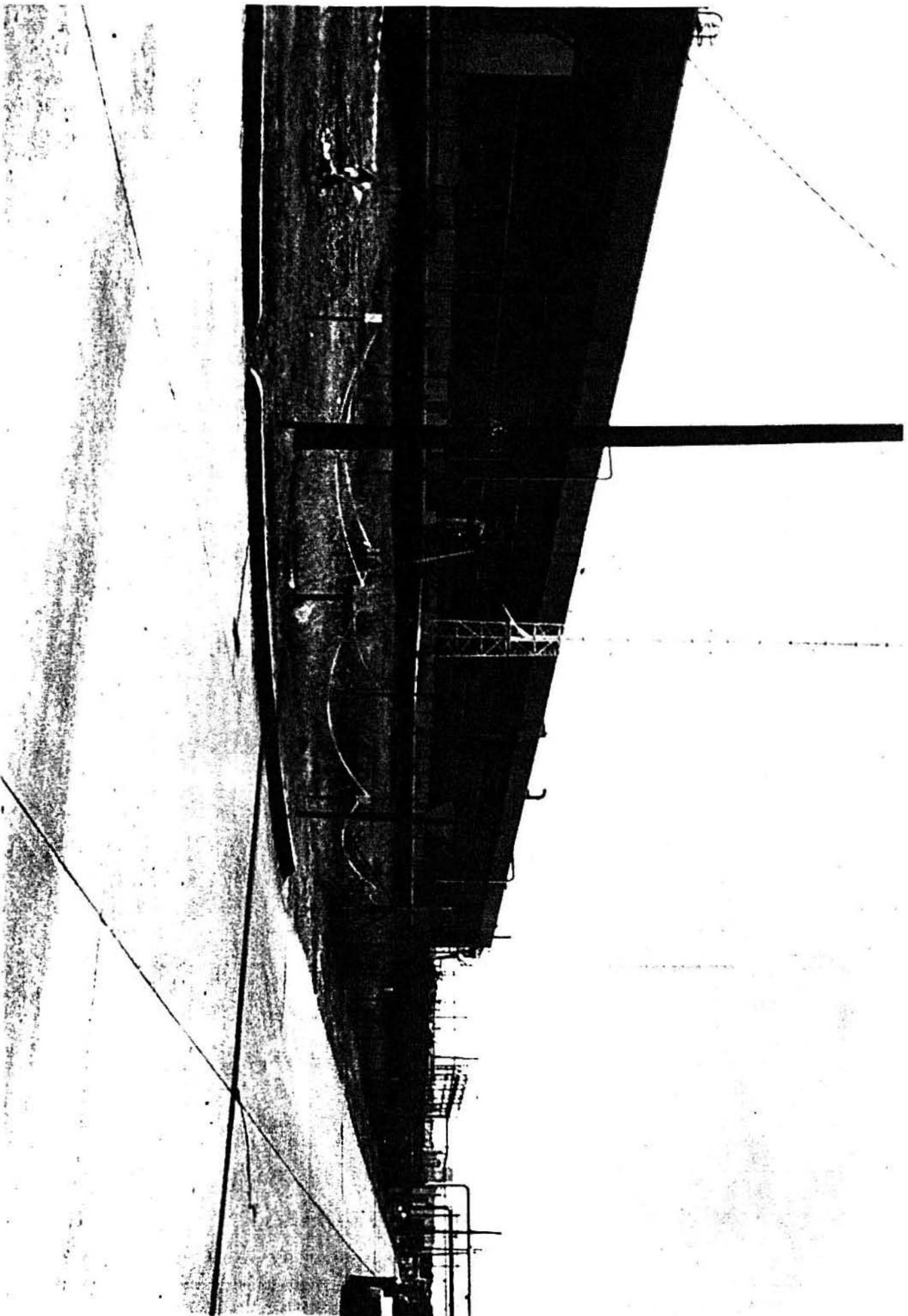
PLUMBING

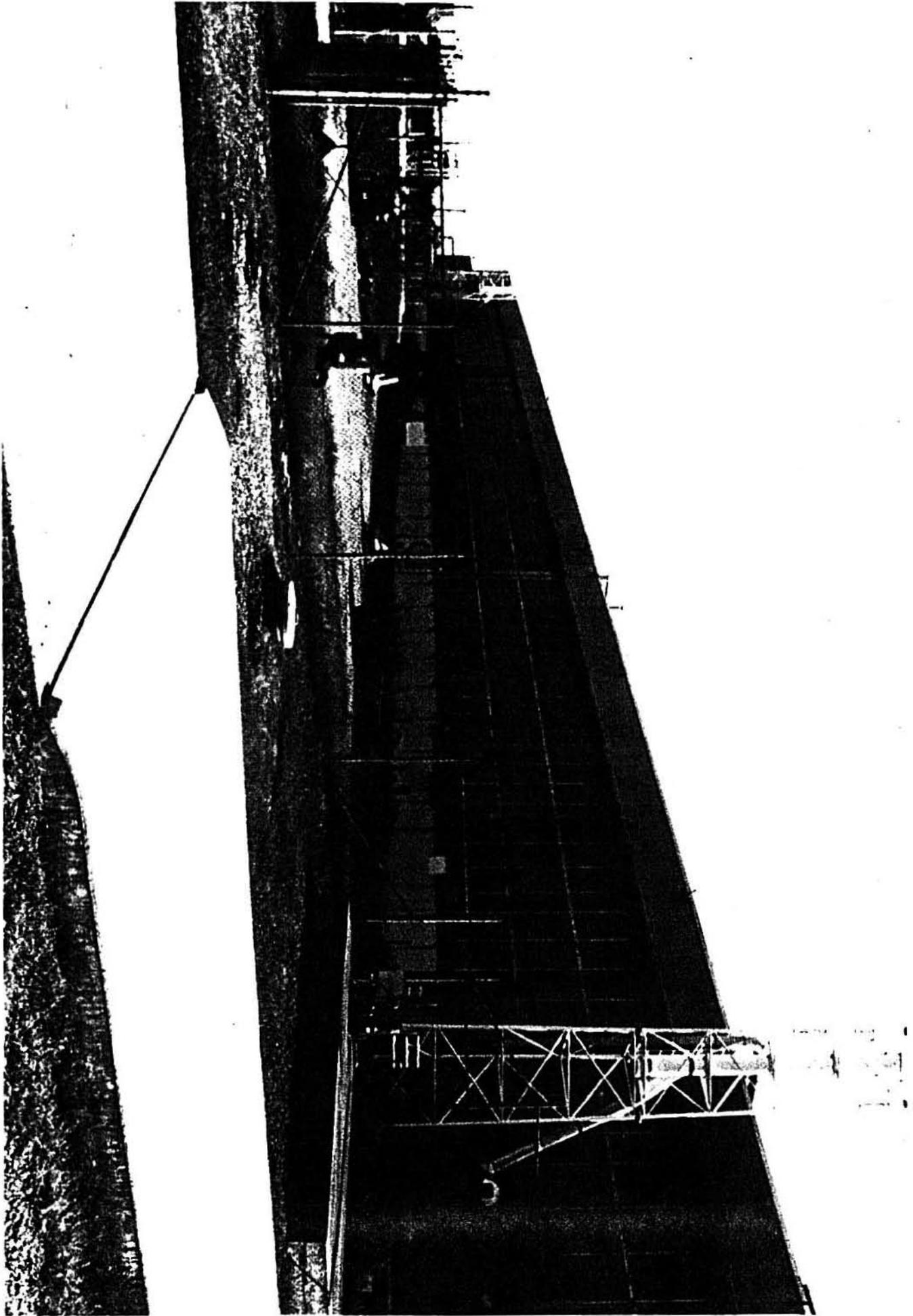


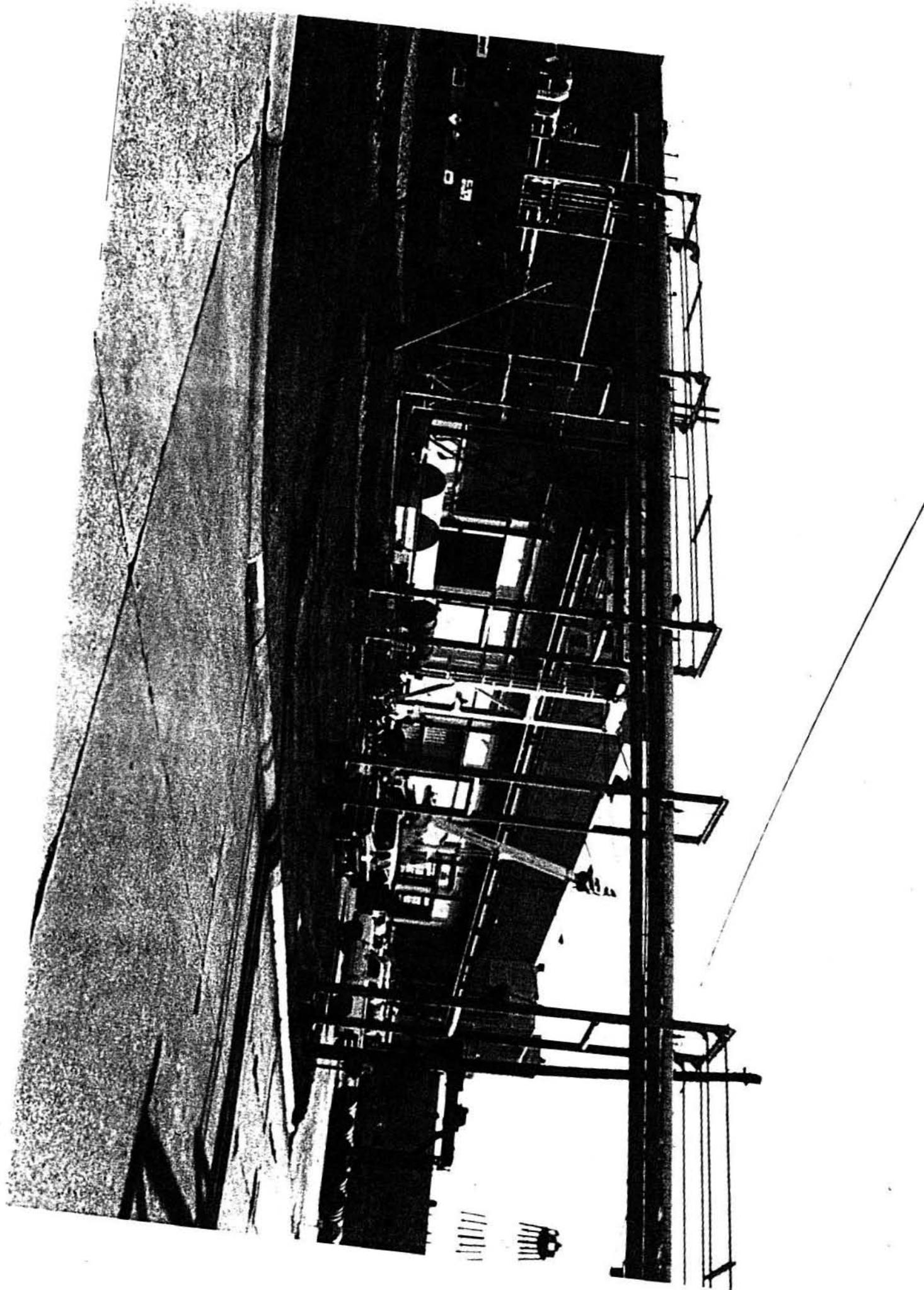












# **WAG 6 Remedial Investigation**

## **Treatability Studies**

- ◆ **Shallow Soils and Groundwater**
  - ◆ **Two-Phase Extraction**
  - ◆ **Six-Phase Heating**
  
- ◆ **Regional Groundwater Aquifer**
  - ◆ **Oxidation**
  - ◆ **Cosolvent and Surfactant Injection**

# **WAG 6 Remedial Investigation**

## **Project Activities**

- ◆ **Submitted RI/FS Work Plan to USEPA/Kentucky, August 1996**
- ◆ **Submitted Revised RI/FS Work Plan to USEPA/Kentucky, January 1997**
- ◆ **USEPA/Kentucky Approved Work Plan, April 16, 1997**
- ◆ **Submit Draft RI Report to USEPA/Kentucky, July 1998**
- ◆ **Submit Draft FS Report to USEPA/Kentucky, October 1998**