

300502-0605080008

CH2M HILL Mound, Inc.

1075 Mound Road

P.O. Box 750

Miamisburg, OH 45343-0750



CH2MHILL

SMO-113/06
February 14, 2006

Mr. Don Pfister, Director
Miamisburg Closure Project
U. S. Department of Energy
175 Tri-County Parkway
Springdale, OH 45246

ATTENTION: Paul Lucas

SUBJECT: **Contract No. DE-AC24-03OH20152: Deliverable #36 Building Data Package; Section C.2.1.1 Facility Demolition; Building 124 (CWPF) Structure OSC Report, Final**

Dear Mr. Pfister:

Attached is the following Final document for your records:

- Building 124 (CWPF) Structure OSC Report, Final

If you or members of your staff have any questions regarding the document, or if additional support is needed, please contact Dave Rakel at 937-865-4203.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael D. Ebben".

Michael D. Ebben
Site Manager

JL/jg

Enclosures

cc: T. Fischer, USEPA, (1) w/attachments
B. Nickel, OEPA, (1) w/attachments
R. Vandegrift, ODH, (1) w/attachments
J. Webb, ODH, (1) w/attachments
M. Wojciechowski, Tetra Tech, (1) w/attach
G. Gorsuch, DOE/MCP, (1) w/attachments
R. Tormey, DOE/OH, (1) w/attachments
G. Desai, DOE/HQ, (1) w/attachments
C. Kline, CH2M Hill, (1) w/attachments
F. Bullock, MMCIC (2) w/attachments
Public Reading Room (1) w/attachments
Admin Records, CH2M Hill, (2) w/attachs

ER Records, CH2M Hill, (1) w/attachs
DCC (1) w/attachments
M. Ebben, CH2M Hill, w/o attachments
K. Armstrong, CH2M Hill, w/o attachments
D. Rakel, CH2M Hill, w/o attachments
D. Kramer, CH2M Hill, w/o attachments
A. Upshaw, CH2M Hill, w/o attachments
MOAT Coordinator, CH2M Hill, w/o attachs
S. Barr, CH2M Hill, w/o attachments
M. McDougal, CH2M Hill, w/o attachments
file, CH2M Hill, w/o attachments

BUILDING 124 (CWPF) STRUCTURE REMOVAL ACTION

No PRSs are closed via this OSC Report

OSC REPORT

February 2006

Final

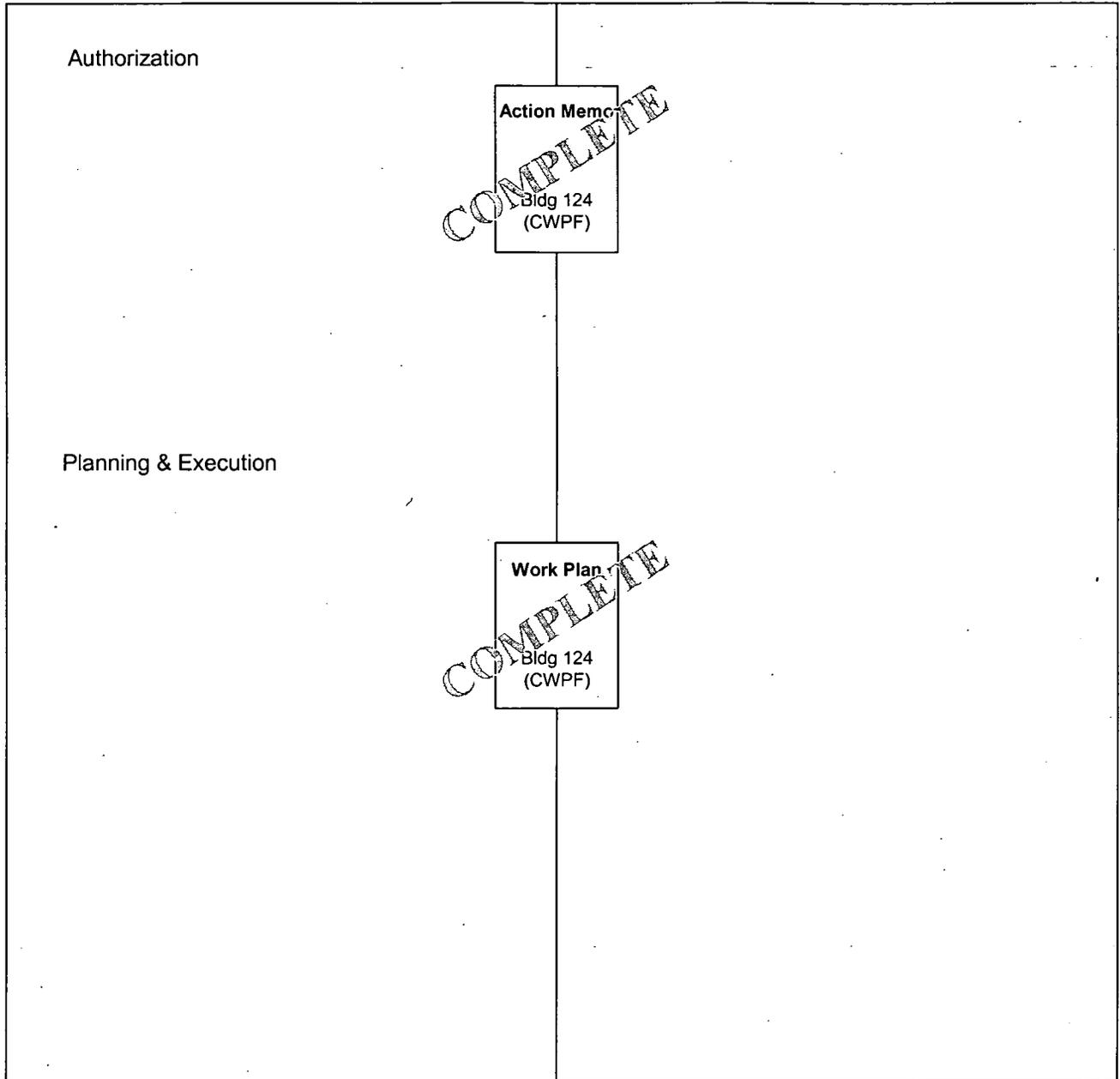


**Department of Energy
Miamisburg Closure Project**



CH2MHILL

Building 124



Authorization

Action Memo

Bldg 124
(CWPF)

COMPLETE

Planning & Execution

Work Plan

Bldg 124
(CWPF)

COMPLETE

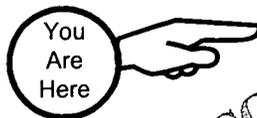
Completion

Structure
OSC Report

Bldg 124
(CWPF)

COMPLETE

Soil below and around Building 124 will be evaluated and remediated (if indicated) via the PRS 41 Removal Action.



No PRSs are closed via this OSC Report.

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Acronyms

B	Biological
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRA	Contingent Removal Action
CWPF	Consolidated Waste Processing Facility
cy	cubic yard
DAC	derived air concentration
DOE	Department of Energy
H	Change House and Laundry
HEPA	High Efficiency Particulate Air
LLRW	Low Level Radioactive Waste
LSA	Low Specific Activity
MCP	Miamisburg Closure Project
NTS	Nevada Test Site
OEPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
PRP	Potentially Responsible Party
PRS	Potential Release Site
R	Research
RA	Removal Action
TRU	Transuranic
USEPA	United States Environmental Protection Agency

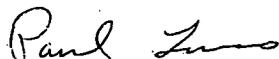
Recommendation

The Building 124 Removal Action (authorized via the Action Memorandum, Building 124 (CWPF) Removal Action, January 2005 (Final)) was performed based on radiological contamination from radioactive operations that occurred within the building. The Action Memorandum included the demolition and disposal of Building 124 superstructure, slab, and foundation (to three feet below grade). There were no Potential Release Sites (PRSs) associated with the building superstructure or slab/foundation.

This OSC Report documents the demolition of the Building 124 superstructure, slab, and foundation only. This portion of the removal action resulted in the disposal of approximately 2,193 cubic yards (cy) of radioactive waste that was sent to Envirocare, Salt Lake City, Utah and 338 cy of construction debris (concrete) meeting surface release criteria that were disposed of (landfilled) through Stoney Hollow Landfill, Dayton, Ohio. This OSC Report closes out the removal of the Building 124 superstructure, slab, and foundation. The removal/remediation and verification of the soil below and around Building 124 will be closed out via the PRS 41 OSC Report.

Recommendation:

After a thorough review of the Building 124 Structure On-Scene Coordinator Report, the Core Team agrees that the Removal Action of the Building 124 superstructure, slab, and foundation is complete, and all previously existing environmental issues associated with this structure have been resolved. No PRSs are closed via this OSC Report.



1/12/06

Paul Lucas, OSC
U.S. Department of Energy
Springdale, Ohio



1/10/06

Timothy J. Fischer, Remedial Project Manager
USEPA
Chicago, Illinois



1/11/06

Brian K. Nickel, Project Manager
OEPA
Dayton, Ohio

1.0 SUMMARY OF EVENTS

This section describes the background and events leading up to the removal action, parties involved in supporting the removal action, chronological narrative of the removal action, and resources committed to complete the project.

1.1 Site Conditions and Background

The Action Memorandum, Building 124 (CWPF) Removal Action, January 2005 (Final) authorized the removal of the Building 124 superstructure, slab, and foundation. This Structure On-Scene Coordinator (OSC) Report documents the completion of the Removal Action for the Building 124 superstructure, slab, and foundation. The levels of radiological contamination present in Building 124 warranted a Removal Action (RA) under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) and subsequent demolition of Building 124 superstructure, slab, and foundation.

The removal and verification of any contaminated soil beneath and in the vicinity of Building 124 will be performed per the PRS 41 Contingent Removal Action, and closed via the PRS 41 OSC Report.

Building 124 Background

Building 124, the Consolidated Waste Processing Facility (CWPF), was constructed as a temporary pre-engineered Rubb Building (tent-type building) in 1998. Building 124 was located as shown in Figure 1, Appendix A.

The building was a 60-ft. wide x 87.5-ft. long (approximately 5,250 square foot), 30 ft tall at the crest, tent-type structure, which had a tension supported steel framework attached to an 8" thick concrete pad. The steel framework was covered with a rubberized fabric. The main ventilation system for the Rubb Building was a high efficiency particulate air (HEPA) filtered system designed to keep the facility under negative pressure. This ventilation system was connected to an exterior fan blower and 30-foot tall, 30-inch diameter stainless steel stack. Interior to the Rubb structure was a prefabricated PermaCon® enclosure (used to provide contamination control for the package opening station and drum compaction units) and a wood-framed tented enclosure (soil blending tent) adjoined the PermaCon® enclosure for decontamination and waste size reduction operations. There were overhead doors on each end of the CWPF. In late 2003 the wood-framed tented enclosure (soil blending tent) was removed (reference demolition work plan # BOSS 38193-00, *Dismantle Soil Blending Tent in Building 124 (CWPF)*) and the facility was reconfigured for use as a heavy-duty equipment maintenance building.

Building 124 was designed and constructed to perform various volume reduction and repackaging functions that included: soil blending of Transuranic (TRU) soils; opening/venting Tritium/TRU containers for repackaging; compaction of "compactable wastes" (such as plastic bags of trash and cardboard); and decontamination of materials for disposal. The CWPF was intended to process Low-Level Radioactive

Waste (LLRW) materials that were generated from site demolition and safe-shutdown activities as well as legacy waste streams. Due to its intended use, the structure had no sanitary sewer drains, storm water drains, or water supply lines.

Appendix D provides photographs of the Building 124 structure before, during, and after demolition.

Associated Potential Release Sites (PRs) and Previous Investigations.

Five (5) PRs were in the vicinity of Building 124. However, none of the five PRs are associated with the Building 124 superstructure or slab/foundation, and none of the five PRs are closed out via this Building 124 Structure OSC Report. The Building 124 PRs are listed in Table 1, Appendix B.

Removal Action. The RA for Building 124 was authorized in the Action Memorandum, Building 124 (CWPF) Removal Action, January 2005 (Final).

Since DOE is the sole responsible party for cleanup of contamination in Building 124, no Potentially Responsible Parties (PRPs) were sought to clean up the site. Monsanto Research Corporation, EG&G Mound Applied Technologies, and BWXT of Ohio, Inc. were the operating contractors at the site from 1948 to 30 September 1988, from 1 October 1988 until 30 September 1997, and from 1 October 1997 until 31 December 2002, respectively. CH2M Hill Mound, Inc. became the site contractor for the Miamisburg Closure Project (MCP) effective January 1, 2003.

1.2 Organization of the Removal Action

Table 2 (Appendix B) lists the parties supporting the removal action and their responsibilities.

1.3 Objectives

Documentation Objective. The objective of this Building 124 Structure OSC Report is to describe the removal action fieldwork and document successful completion of the structure portion of the RA. Demolition debris quantities and disposition locations are presented in Table 3, Appendix B. The cost breakdown of the structure portion of the RA is presented in Table 4.

The removal and verification of any contaminated soil below and in the vicinity of Building 124 will be performed per the PRS 41 Contingent Removal Action (CRA), and closed via the PRS 41 OSC Report.

Removal Action Objectives. The objectives of the removal action, as outlined in the Action Memorandum, Building 124 (CWPF) Removal Action, January 2005 (Final) and documented in this Building 124 Structure OSC Report include:

- Project Planning

- Public Notification
- Demolition
- Verification
- Documentation of Completion

The following activities will be documented in the PRS 41 OSC Report:

- Remove/Remediate any Contaminated Soil Beneath and in the Vicinity of Building 124
- Sampling and Verification of Areas Remediated
- Site Restoration
- Documentation of Completion

Verification of the removal of the Building 124 superstructure, slab, and foundation is provided in the photographs included in Appendix D.

1.4 Chronological Narrative of the Removal Action

The following is a chronological narrative of events surrounding the Building 124 structure RA.

Timeframe	Activity
1998	Building 124 initial construction complete
November - December 2003	Soil blending operations cease and soil blending tent dismantled and removed. Building 124 soil blending area/slab decontamination
Early 2004	Building 124 converted to heavy-duty equipment maintenance building.
January 2005	Building 124 (CWPF) Final Action Memorandum issued
June 2005	Building 124 heavy-duty equipment maintenance operations ceased
June - July 2005	Building 124 decontamination/safe shutdown of facility
July - August 2005	Building 124 superstructure, slab, and foundation demolished
October 2005	Building 124 Structure OSC Report generated

2.0 EFFECTIVENESS OF THE REMOVAL ACTION

The Building 124 structure has been demolished, and the debris removed and properly disposed of per the Work Package (BOSS-38221). Photographs taken before, during and after demolition are included in Appendix D.

2.1 Actions Taken by Site Contractor

CH2M HILL Mound, Inc. personnel planned and performed removal action oversight, building decontamination, Rubb Building covering dismantlement, superstructure and slab/foundation demolition, and onsite transportation and staging of debris. The project met the removal action objectives related to the Building 124 superstructure, slab, and foundation, as outlined in the Action Memorandum, Building 124 (CWPF) Removal Action, January 2005 (Final) and the demolition work plan, Demolition of Building 124.

In accordance with the RA, the following actions were taken: Project Planning, Public Notification, Demolition (of the superstructure and slab/foundation), including proper disposal of the debris. This Structure OSC Report provides the documentation of completion for the removal of the Building 124 superstructure, slab, and foundation. The removal/remediation and verification of any contaminated soil below and in the vicinity of Building 124 will be performed per the PRS 41 Contingent Removal Action, and closed via the PRS 41 OSC Report.

Building Dismantlement and Demolition

To mitigate the generation of airborne radioactive contamination during demolition activities, engineering controls were employed. These controls included (but were not limited to) using water misting to prevent fugitive dust emissions and sealing/bagging of contaminated equipment/ducting. In order to prevent excess debris, silt, or other materials from entering surface streams or the storm sewer system, resulting from water misting and/or rainwater, surface water runoff/runoff was controlled by the use of straw bales around designated demolition areas and by silt protection covers over field grates.

The PermaCon® HEPA unit, equipment, and ductwork were sealed (during safe shutdown activities) and disposed of as low-level waste in appropriate containers to prevent the possible spread of radiological contamination. The Rubb structure, all interior structures (PermaCon®) and equipment, and the radiologically contaminated slab section were removed and disposed as low level waste. The uncontaminated slab section and foundation walls (to three feet below grade) were removed and disposed in an industrial landfill. Water misting was performed during demolition activities with the goal of no visible fugitive dust.

Prior to demolition, Radiological Controls performed an evaluation of the radiological history of the building and performed radiological surveys to determine levels and types of contamination. Only material that met surface release criteria was released for landfill disposal (see Table 3). All radioactively contaminated debris was size reduced and packaged to meet the Envirocare waste acceptance criteria.

Further evaluation, soil sampling, and verification of this area will be performed as part of the PRS 41 Contingent Removal Action activities. No walkover survey was performed on the area of Building 124 due to the pending verification sampling activities for the PRS 41 CRA. No elevated levels were detected during radiological screening (debris pile surveys) of the Building 124 structure concrete surfaces in contact with soils. The

Building 124 area site restoration will take place after verification sampling and remediation activities for the PRS 41 CRA.

The Building 124 superstructure, slab, and foundations were removed; photograph documentation is provided in Appendix D.

Air Monitoring for Worker Safety

The HEPA filter unit and open ductwork were sealed during safe shutdown activities. From the results of the pre-demolition radiological surveys performed by the Mound Radiological Control organization, it was determined that no air monitoring was required during the Building 124 demolition activities; therefore, no air monitoring results are provided in Appendix E.

The air monitoring results from the site perimeter monitors were all below the 0.3 DAC Mound posting criteria. No MCP worker or environmental exposure limits were exceeded, thus the demolition activities did not pose an unacceptable risk to human health or the environment.

2.2 Actions Taken by Local, State, and Federal Agencies

The Department of Energy (DOE)/MCP, the United States Environmental Protection Agency (USEPA), and Ohio EPA (OEPA) had oversight responsibility for the removal action. The DOE/MCP was the lead agency for the RA and provided the funding and oversight for the RA. The USEPA and OEPA have oversight responsibility for the RA and review of the Action Memorandum and OSC Reports to ensure that the objectives are/were met.

2.3 Actions Taken by Subcontractor

Subcontractors involved in the Building 124 structure demolition project included the following:

- Envirocare (Salt Lake City, Utah) received radioactive waste via rail and truck,
- Stoney Hollow Landfill (Dayton, Ohio) transported and dispositioned concrete demolition debris (slab/foundation meeting surface release criteria).

3.0 DIFFICULTIES ENCOUNTERED

3.1 Items that Affect the Removal Action

No difficulties were encountered that affected the removal action.

3.2 Issues of Intergovernmental Coordination

All DOE/USEPA/OEPA interactions were good. The agencies were updated informally on a regular basis, and formally at monthly Core Team meetings. The Mound 2000 Process worked well.

4.0 RECOMMENDATIONS

4.1 Means to Prevent a Recurrence

The building debris was removed and properly disposed of per the Core Team-approved work plan; therefore, the spread of contamination was prevented.

Any contaminated soil below and in the vicinity of Building 124 will be removed/remediated and verified in accordance with the PRS 41 Contingent Removal Action, and will be closed out via the PRS 41 OSC Report. Mound Removal Actions have regulator approved work plans, each of which has a section that addresses runoff/runoff controls. In addition, the site Storm Water Pollution Prevention Plan applies to the entire site and is monitored by the Environmental Compliance and Analytical Services group. As a result of the removal and runoff/runoff protection, spread of contamination is prevented. After the removal action and the CERCLA process for the parcel are complete, the area will be transferred from federal to private ownership. All State and Federal disposal rules will apply.

APPENDIX A

FIGURES

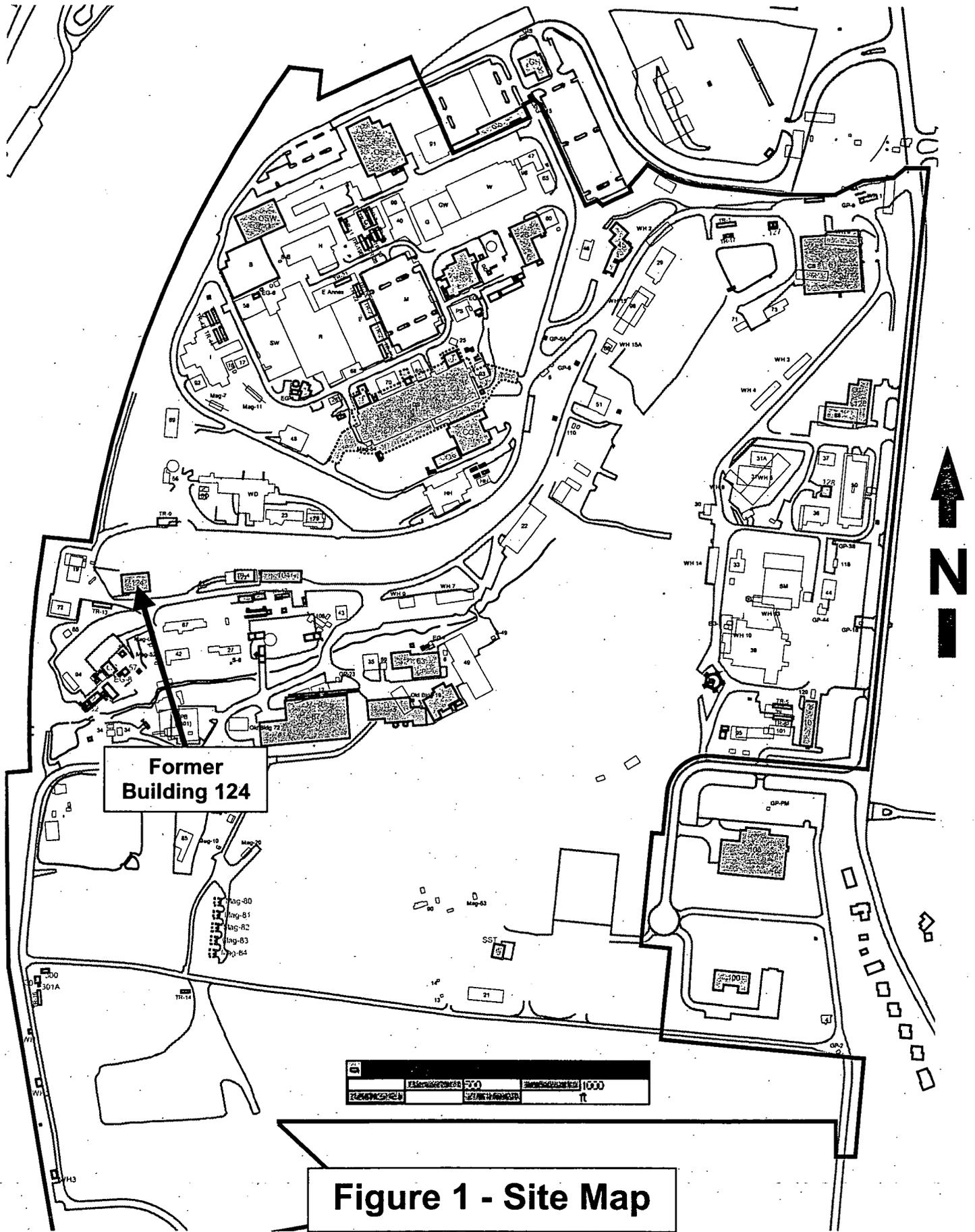


Figure 1 - Site Map

APPENDIX B

TABLES

Table 1 - PRSs in the Vicinity of Building 124

No PRSs are closed out via this structure OSC Report. Any PRSs associated with soils below and in the vicinity of Building 124 will be addressed via the PRS 41 OSC Report.

PRS	CERCLA or Bldg. Related	Binning Status	Comments
7	CERCLA	Further Assessment (FA)	Plant Sanitary Outfall pipeline.
41	CERCLA	RA	Area 3, Thorium drum storage and redrumming area.
64	CERCLA	No Further Assessment (NFA)	Building 19 historic gasoline tank (Tank 238)
176	CERCLA	NFA	Area 14, radioactive waste line break.
420	CERCLA	NFA	Wetland

Table 2: Organization of the Removal Action

Agency or Party Involved	Contact	Description of Participation
US EPA (SR-6J) 77 W. Jackson Chicago, IL 60604 312-886-7058	Timothy J. Fischer USEPA Remedial Project Manager	Federal agency responsible for MCP oversight.
Ohio EPA 410 E. Fifth Street Dayton, OH 45402-2911 937-285-6468	Brian K. Nickel OEPA Project Manager	State agency responsible for MCP oversight.
DOE/ MCP 175 Tri-County Parkway Springdale, OH 45246 513-246-0071	Paul Lucas DOE/MCP On- Scene Coordinator	DOE is responsible for project oversight and success.
CH2M Hill Mound, Inc. 1075 Mound Road P. O. Box 750 Miamisburg, OH 45343-0750 937-673-2874	Allen Upshaw	Performed demolition, provided the DOE/ MCP Project Manager with technical assistance, administrative support, sampling, decontamination, site safety, and report preparation.

Table 3: Materials and Disposition

Building 124 Material	Quantity	Disposal Method	Destination
Construction Debris Slab	338 cubic yards	Rail/Truck	Stoney Hollow Landfill, Dayton, OH
Low Level Radioactive Waste	2193 cubic yards	Rail/Truck	Envirocare, Salt Lake City, Utah

Table 4: Costs of Building 124 Structure Removal

Under the site contract, CH2M Hill Mound, Inc. has elected to cluster financial data for multiple buildings together. Cluster 124 includes costs for Building 72 and Building 124 and as a result, cost data for the individual building demolitions are not available. The costs reported here include costs associated with the demolition of superstructures, slabs/ foundation removals, disposal, and post demolition radiological surveys for both Buildings 72 and 124. The removal/remediation, verification of any contaminated soil below and in the vicinity of Buildings 72 and 124 and site restoration will be performed as part of the PRS 41 Contingent Removal Action and will be detailed in the PRS 41 OSC Report.)

Item	Cost
Work Planning & Regulatory Documentation	\$12,000
Facility Preparation/Removals	\$43,000
Radiological Support/Decontamination	\$7,000
Demolition	\$25,000
Total	\$ 87,000

APPENDIX C

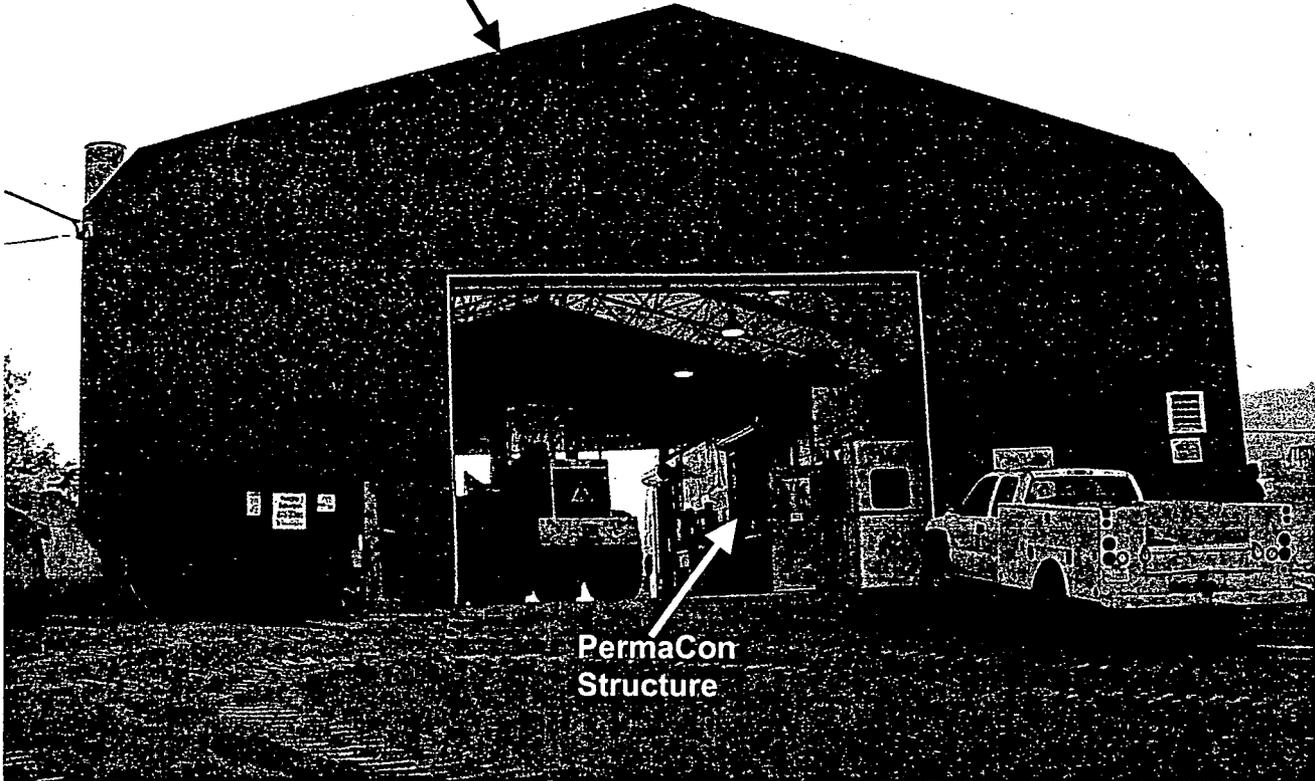
GENERAL MEDIA INFORMATION

No Media Information Exists

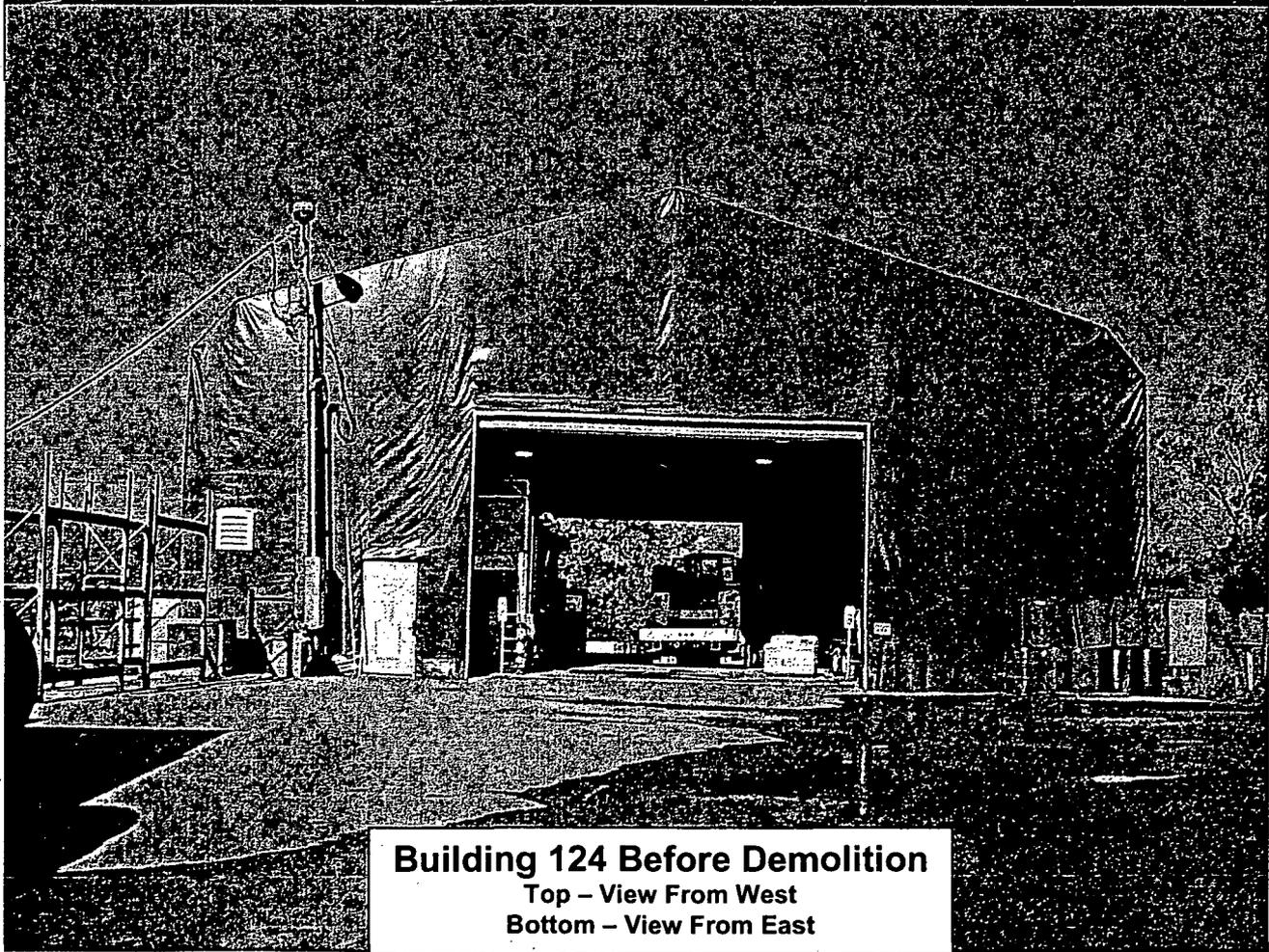
APPENDIX D

PHOTOGRAPH DOCUMENTATION

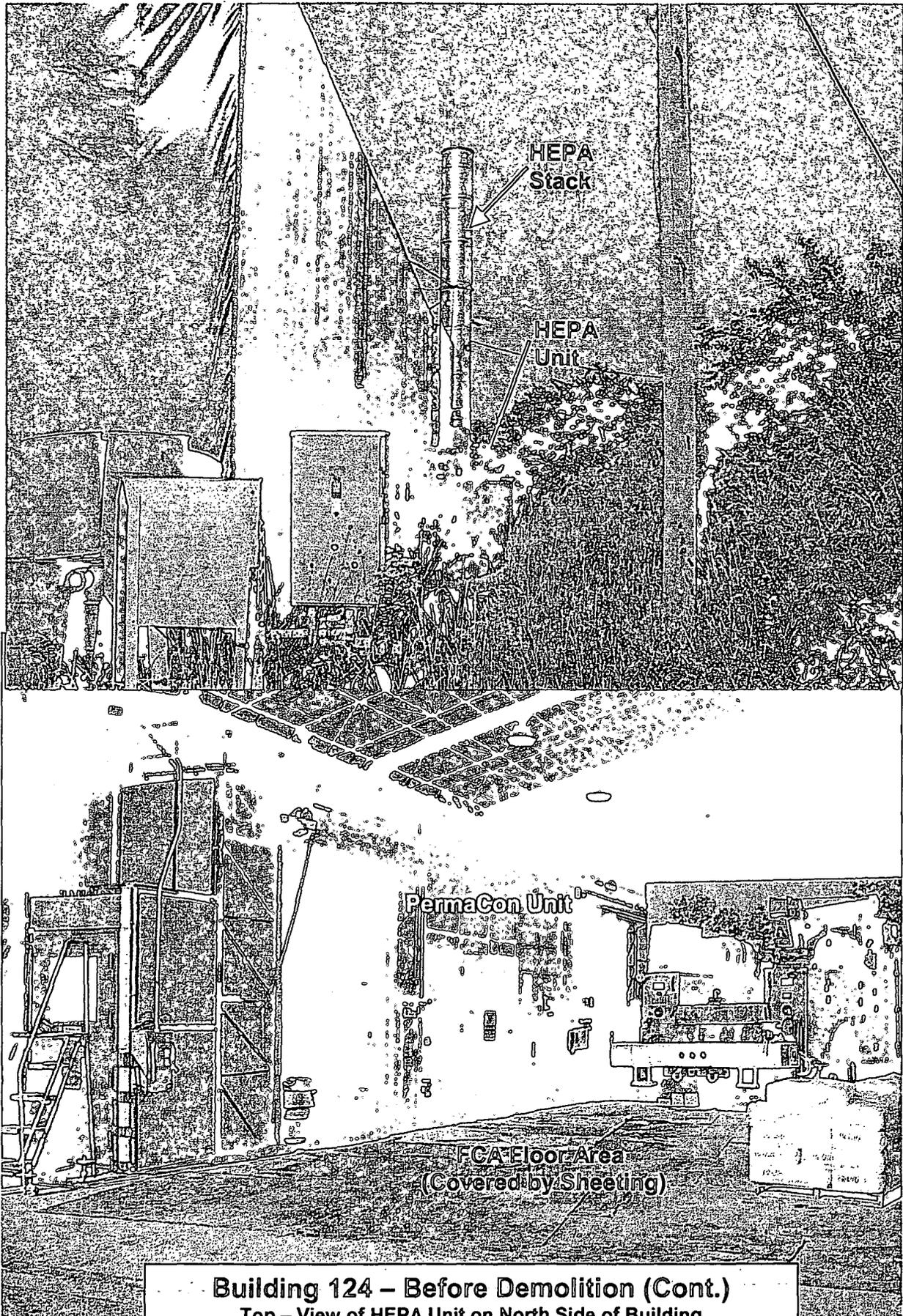
Building 124 (Rubb type building)
has a steel framework covered
with a rubberized fabric



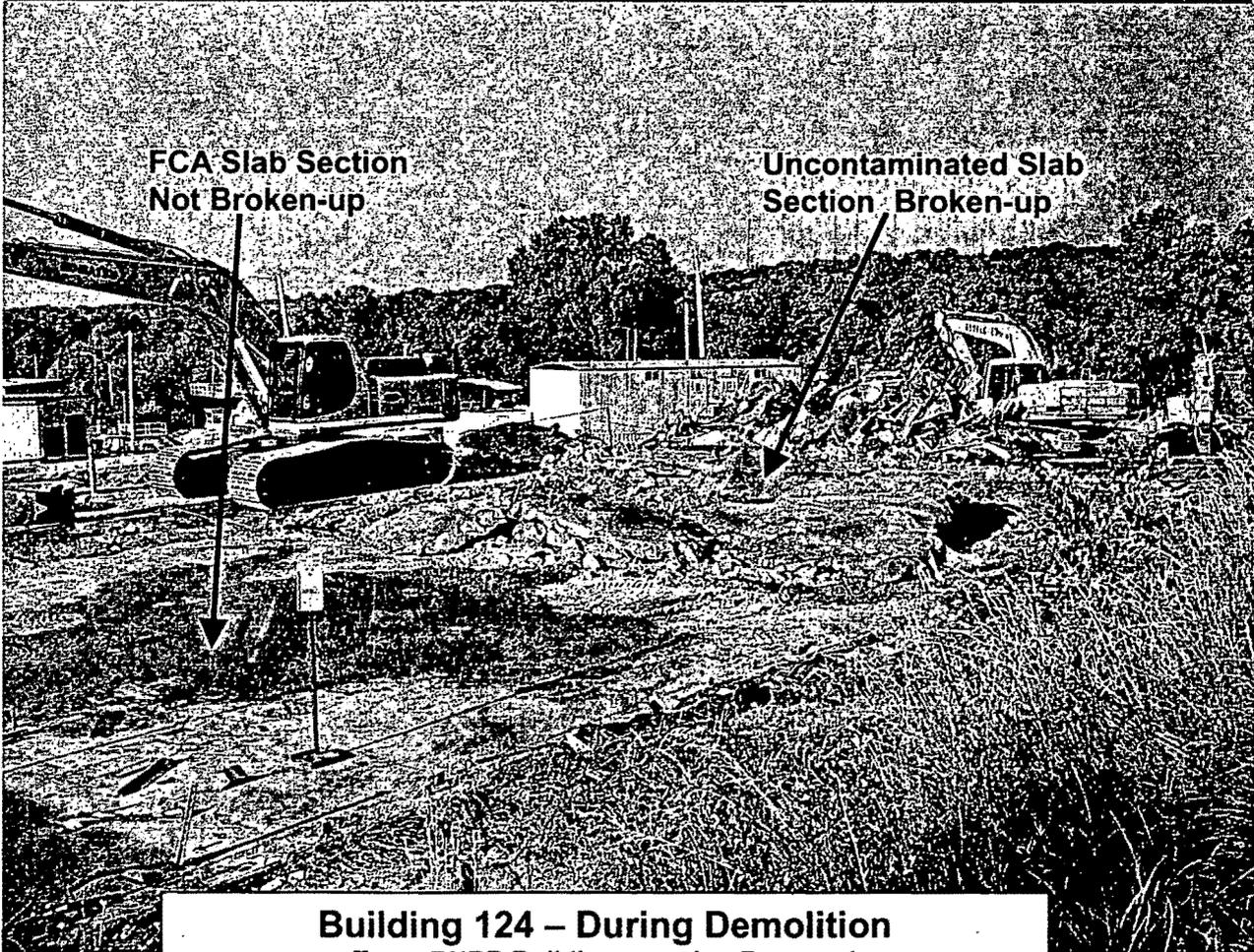
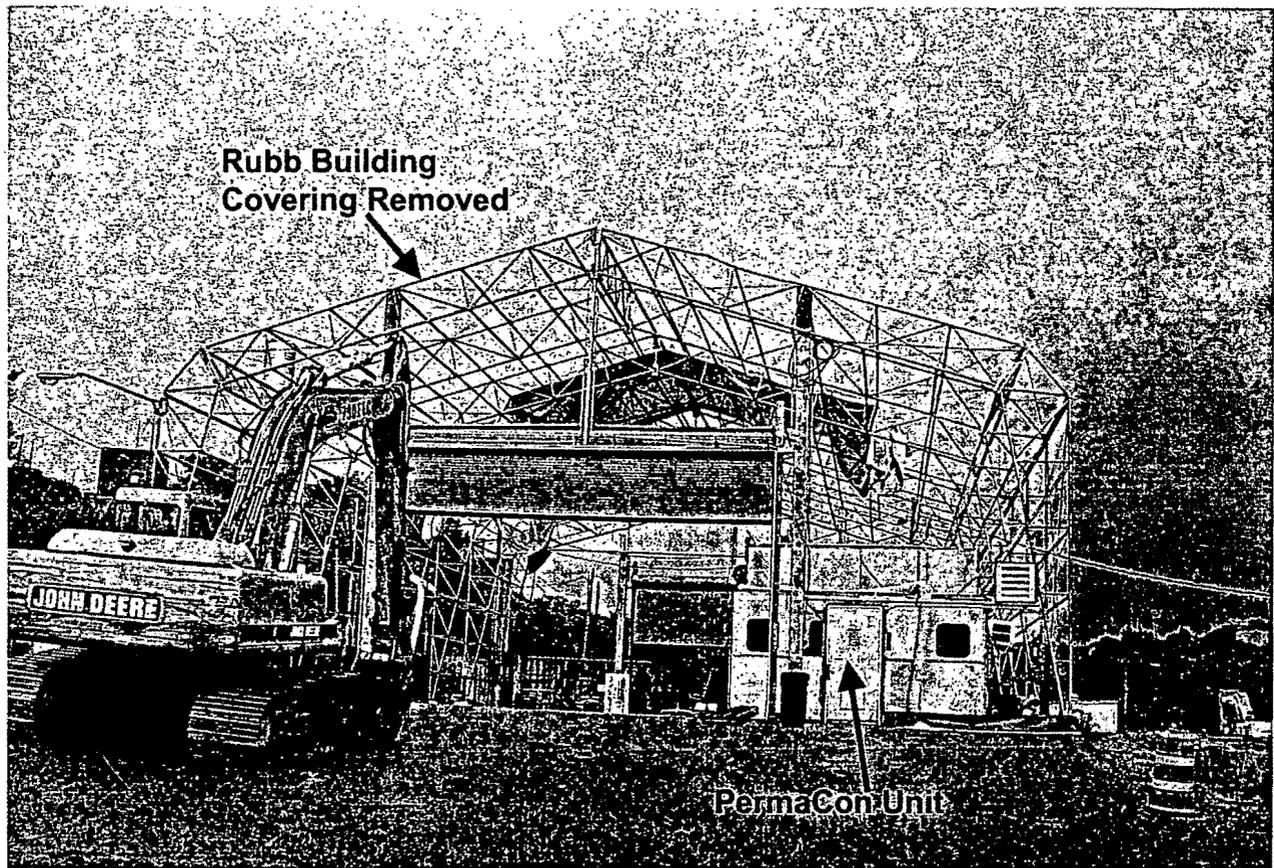
PermaCon
Structure



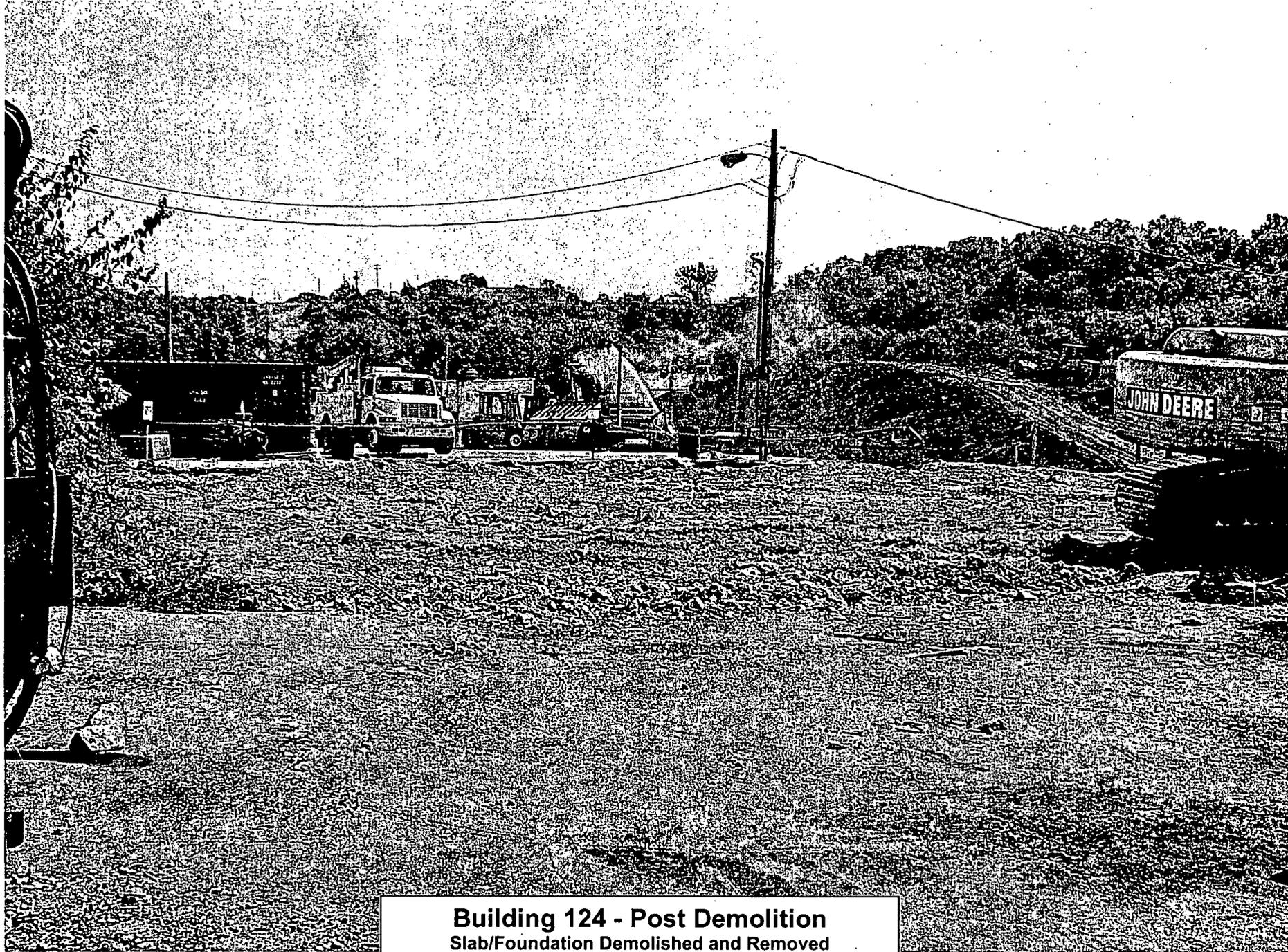
Building 124 Before Demolition
Top - View From West
Bottom - View From East



Building 124 – Before Demolition (Cont.)
Top – View of HEPA Unit on North Side of Building
Bottom – View of PermaCon Unit and Fixed Contamination Area
(FCA) of Floor (Covered by Sheeting)



Building 124 – During Demolition
Top – RUBB Building covering Removed
Bottom – Building 124 Slab, Non-Contaminated Slab Area Fractured for Removal



Building 124 - Post Demolition
Slab/Foundation Demolished and Removed

APPENDIX E

RADIOLOGICAL AIR MONITORING RESULTS

No Radiological Air Monitoring Results Included