

Department of Energy

Portsmouth/Paducah Project Office 1017 Majestic Drive, Suite 200 Lexington, Kentucky 40513 (859) 219-4000

March 18, 2021

PPPO-02-10009618-21

Mr. Brian Begley
Federal Facility Agreement Manager
Division of Waste Management
Kentucky Department for Environmental Protection
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601

Mr. Victor Weeks Federal Facility Agreement Manager U.S. Environmental Protection Agency, Region 4 61 Forsyth Street Atlanta, Georgia 30303

Dear Mr. Begley and Mr. Weeks:

TRANSMITTAL OF THE SITE EVALUATION REPORT FOR THE C-724-B CARPENTER SHOP AT THE PADUCAH GASEOUS DIFFUSION PLANT, PADUCAH, KENTUCKY, DOE/LX/07-2455&D1

In accordance with Appendix 4 of the approved Site Management Plan of the Paducah Federal Facility Agreement (FFA), the U.S. Department of Energy (DOE) is submitting the D1 Site Evaluation Report for the C-724-B Carpenter Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2455&D1 (SE), to the U.S. Environmental Protection Agency (EPA) and the Kentucky Department for Environmental Protection (KDEP) for review and comment. A joint policy issued under the DOE and EPA memorandum, dated May 22, 1995, Policy on Decommissioning Department of Energy Facilities Under CERCLA, establishes a framework for conducting the decommissioning of DOE facilities and also provides guidance on the use of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response authority to decommission DOE facilities. This policy states that DOE is required to conduct a removal site evaluation, in accordance with the National Contingency Plan and interagency agreements (i.e., FFA), to assess site conditions and determine whether a release or substantial threat of release exists at the facility. DOE, EPA, and KDEP have agreed to conduct decontamination and decommissioning activities for those facilities that pose an environmental release threat at the Paducah Site under the existing FFA. Section IX, Site Evaluation(s), of the FFA requires that DOE conduct integrated site evaluations that consist of the removal site evaluation, remedial site evaluation, and solid waste management unit assessment reports. These integrated site evaluations are to be documented in an SE report.

No information warranting the designation of the C-724-B facility, or portions thereof, as a SWMU or area of concern was identified. As a result, the enclosed SE recommends that CERCLA action for the facility is not necessary for demolition of the C-724-B facility

aboveground structure. Upon approval, the *Detailed Facility D&D OU Facilities List* in Appendix 4 will be updated to indicate that the facility requires no further action.

In accordance with Section XX of the FFA, EPA and KDEP have a 30-day review period to provide comments and/or approval of the document.

If you have any questions or require additional information, please contact me at (270) 441-6862.

Sincerely,

Tracey L. Digitally signed by Tracey L. Duncan
Duncan
Digitally signed by Tracey L. Duncan
Date: 2021.03.18
13:53:30 -05'00'

Tracey Duncan
Federal Facility Agreement Manager
Portsmouth/Paducah Project Office

Enclosures:

- 1. Certification Page
- 2. D1 Site Evaluation C-724-B

Administrative Record File—DDARC

cc w/enclosures:
abigail.parish@pppo.gov, PPPO
april.ladd@pppo.gov, PPPO
april.webb@ky.gov, KDEP
arcorrespondence@pad.pppo.gov
brian.begley@ky.gov, KDEP
bruce.ford@pad.pppo.gov, FRNP
bwhatton@tva.gov, TVA
christopher.travis@ky.gov, KDEP
frnpcorrespondence@pad.pppo.gov
hjlawrence@tva.gov, TVA
jana.white@pad.pppo.gov, FRNP
jennifer.woodard@pppo.gov, PPPO

joel.bradburne@pppo.gov, PPPO

leanne.garner@pad.pppo.gov, FRNP leo.williamson@ky.gov, KDEP mkbottorff@tva.gov, TVA mmcrae@TechLawInc.com, EPA myrna.redfield@pad.pppo.gov, FRNP nathan.garner@ky.gov, KYRHB pad.rmc@pad.pppo.gov rlhoope0@tva.gov, TVA robert.edwards@pppo.gov, PPPO stephaniec.brock@ky.gov, KYRHB tracey.duncan@pppo.gov, PPPO weeks.victor@epa.gov, EPA

CERTIFICATION

Document Identification:

Site Evaluation Report for the C-724-B Carpenter Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-2455&D1

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Four Rivers Nuclear Partnership, LLC

Myrna E. Redfield, Program Manager Four Rivers Nuclear Partnership, LLC Date Signed

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

U.S. Department of Energy

Jennifer Woodard, Paducah Site Lead

Portsmouth/Paducah Project Office

U.S. Department of Energy

Date Signed

Site Evaluation Report for the C-724-B Carpenter Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky



CLEARED FOR PUBLIC RELEASE

DOE/LX/07-2455&D1 Primary Document

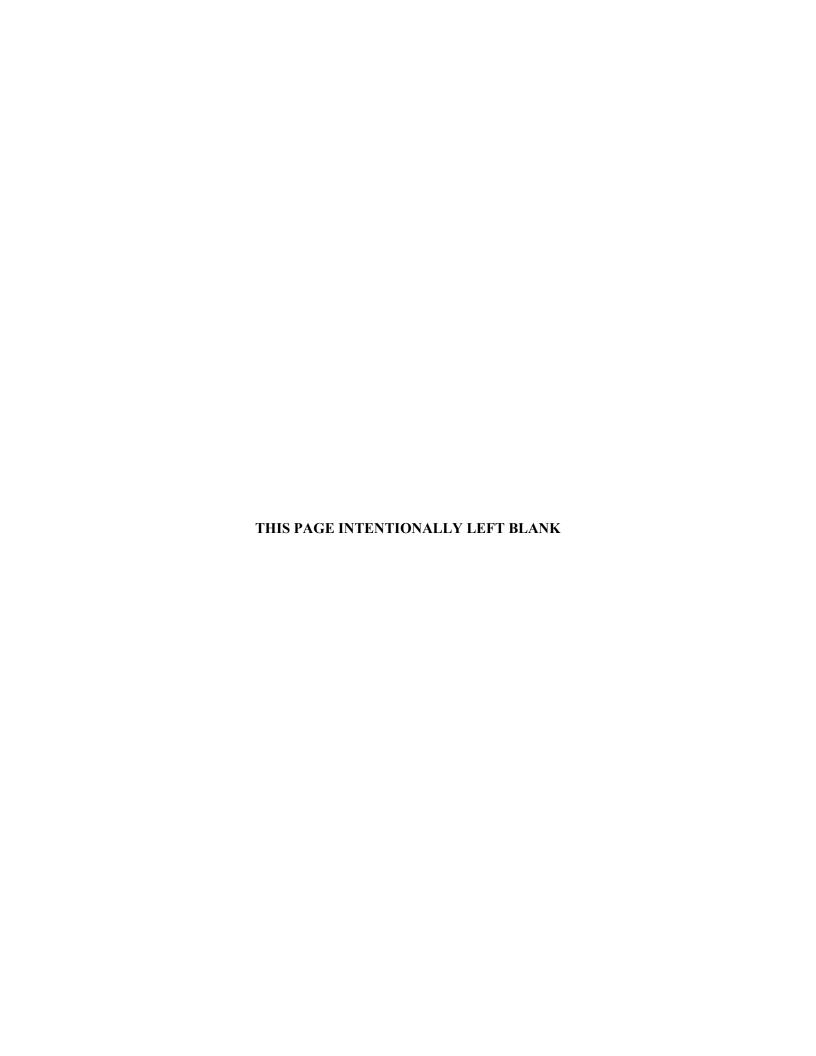
Site Evaluation Report for the C-724-B Carpenter Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky

Date Issued—March 2021

U.S. DEPARTMENT OF ENERGY Office of Environmental Management

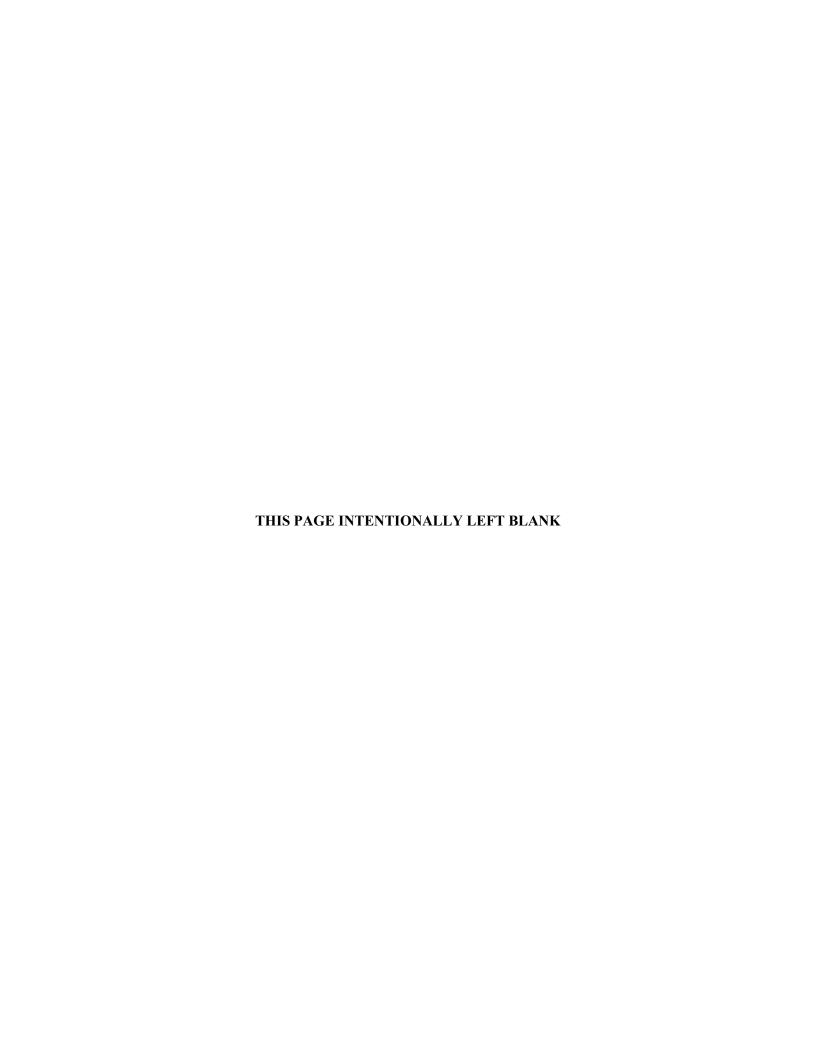
Prepared by
FOUR RIVERS NUCLEAR PARTNERSHIP, LLC,
managing the
Deactivation and Remediation Project at the
Paducah Gaseous Diffusion Plant
under Contract DE-EM0004895

CLEARED FOR PUBLIC RELEASE



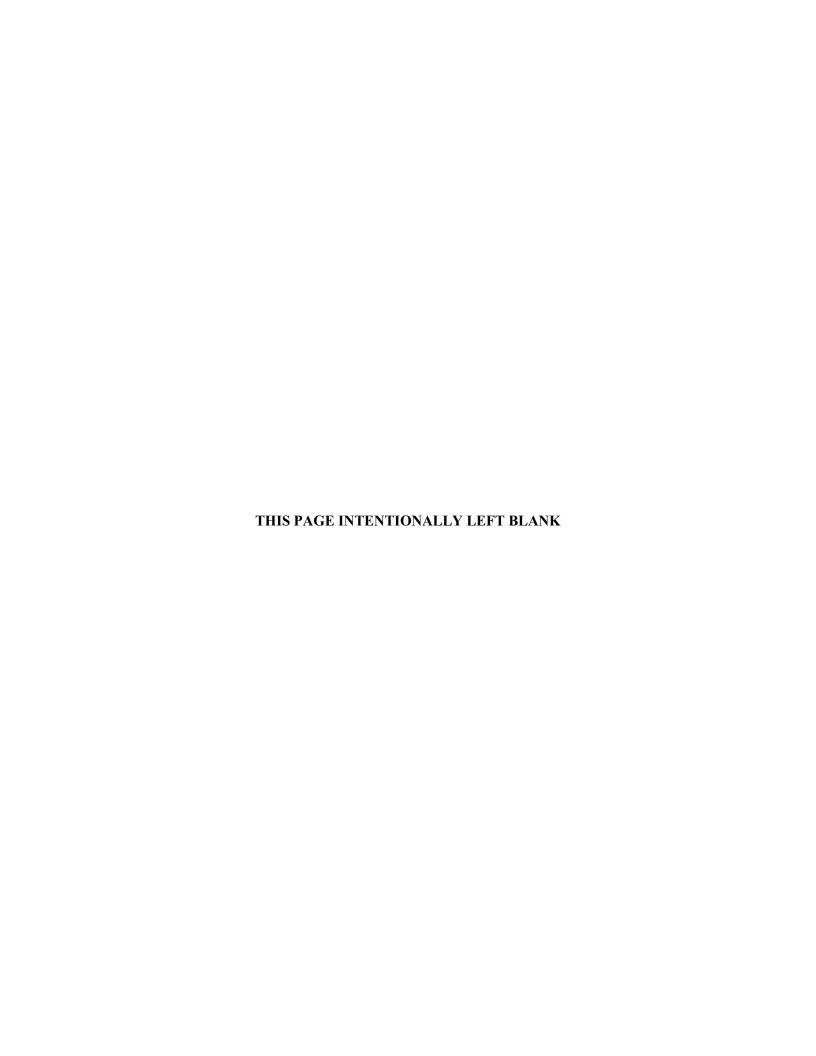
CONTENTS

FIG	URES	V
ACF	RONYMS	vii
1.	FACILITY/UNIT NUMBER	1
2.	FACILITY/UNIT NAME	1
3.	DATE	1
4.	REGULATORY STATUS	1
5.	LOCATION	1
6.	APPROXIMATE DIMENSION OR CAPACITY	2
7.	FUNCTION	2
8.	BRIEF HISTORY	2
9.	OPERATIONAL STATUS	2
10.	DATES OPERATED	2
11.	SITE/PROCESS DESCRIPTION	2
12.	WASTE DESCRIPTION	3
13.	WASTE QUANTITY	3
14.	SUMMARY OF ENVIRONMENTAL SAMPLING DATA	3
15.	DESCRIPTION OF RELEASE AND MEDIA AFFECTED	3
16.	DOCUMENTATION OF NO RELEASE	4
17.	IMPACT ON OR BY OTHER SWMU/AOC	4
18.	PRELIMINARY REMEDIATION GOAL COMPARISON	4
19.	RCRA FACILITY INVESTIGATION NECESSARY	4
20.	CERCLA NTCRA NECESSARY	4
21.	OU ASSIGNMENT	5
22.	REFERENCES	5
APP	PENDIX: ENGINEERING DRAWINGS AND AERIAL PHOTOGRAPH	A-1



FIGURES

1.	Facility Designation for C-724-A, -B, and -C	6
2.	Aerial Photograph Showing the C-724-B Carpenter Shop Locattion	7
3.	Map Showing C-724-B Carpenter Shop Location	8
4.	Engineering Drawing D-S-10021-J Rev. 0 of C-724-B and C-724-C	9
5.	Engineering Drawing D-S-10021-Q Rev. 1 of Dust Collection System	10
6.	C-724-B Exterior Southwest Cornder (Looking North and East)	11
7.	C-724-B Dust Collection System Located at the Northwest Corner of C-724-B	12
8.	C-724-B Interior Equipment	13
9.	C-724-B Miscellaneous Equipment and Tools	14
10.	C-724-B Breakroom Storage Room and Lock Shop	
11.	SWMU and Sample Locations near C-724-B	16



ACRONYMS

ACM asbestos-containing material

AOC area of concern

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

D&D decontamination and decommissioning

DOE U.S. Department of Energy

EPA U.S. Environmental Protection Agency

FFA Federal Facility Agreement NTCRA non-time-critical removal action

OU operable unit

RCRA Resource Conservation and Recovery Act

RMA radioactive material area

SE site evaluation

SMP Site Management Plan

SWMU solid waste management unit



1. FACILITY/UNIT NUMBER

C-724-B

2. FACILITY/UNIT NAME

Carpenter Shop

3. DATE

March 18, 2021

4. REGULATORY STATUS

A joint policy issued under a U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) Memorandum dated May 22, 1995, Policy on Decommissioning Department of Energy Facilities under CERCLA (DOE 1995), establishes a framework for conducting decommissioning of DOE facilities and provides guidance on the use of Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) response authority to decommission DOE facilities. The Policy states that DOE is required to conduct a removal site evaluation (SE) in accordance with the National Contingency Plan and the requirements of any interagency agreements [i.e., Federal Facility Agreement (FFA)] to assess site conditions and determine whether a release or substantial threat of release exists at the facility. At any facility for which DOE conducts a removal site evaluation, DOE will consult with EPA and will provide, as requested, EPA with such information necessary for EPA to review such evaluation. DOE, EPA, and the Commonwealth of Kentucky have agreed to conduct decontamination and decommissioning (D&D) activities for those facilities that pose an environmental release threat at the Paducah Gaseous Diffusion Plant under the existing FFA. Section IX [Site Evaluation(s)] of the FFA requires that DOE conduct integrated SEs that consist of the removal site evaluation, remedial site evaluation, and solid waste management unit (SWMU) assessment report. The integrated SEs are to be documented in a site evaluation report consistent with the format in Appendix D of the FFA (EPA 1998).

Industrial facilities that DOE has determined to pose a potential threat of release of hazardous substances to the environment are listed as part of the facility D&D Operable Unit (OU) in Appendix 4 of the Site Management Plan (SMP) (DOE 2020). The SE report shall state whether demolition of the facility should be conducted using a CERCLA Non-Time-Critical Removal Action (NTCRA) and will serve to designate any facility, or portions thereof, that are related to any identified release as a SWMU and/or area of concern (AOC).

5. LOCATION

A review of engineering drawings and historical reports have identified inconsistencies between the C-724-A and C-724-B facility designations and locations for some geographic information system layers being used at the Paducah Site. Based on the earliest engineering drawings, the C-724-A facility was constructed in 1955 and the C-724-B/-C facility was constructed in 1956. C-724-C is located in the southeast portion of C-724-B. A women's change house was added to the southern part of C-724-C in 1975. Figure 1 identifies the correct facility designations and locations which are consistent with the physical facility numbers mounted on each facility.

The C-724-B facility is located in the south-central portion of the Paducah Site industrialized area, northwest of the C-720 Maintenance and Storage Building. See Figure 2, Aerial Photograph Showing the

C-724-B Carpenter Shop Location, and Figure 3, Map Showing the C-724-B Location, for C-724-B facility location.

6. APPROXIMATE DIMENSION OR CAPACITY

C-724-B is a one-story concrete block building built in 1956. The building has a flat 4-ply built up roof and an 8-inch concrete floor slab. The original configuration of the facility as shown on Figure 4, Engineer Drawing D-S-10021-J, Rev. 0, shows this facility as 123 ft \times 83 ft 4 inches (\sim 10,250 ft²). However, since the C-724-C facility is shown as a subset of this facility, the C-724-C area has been subtracted from the 10,250 ft² of the total facility to get the square footage for the C-724-B portion of the facility. Based on the same drawing, the C-724-C facility measures 48 ft 3 inch \times 50 ft 2 inch (\sim 2,421 ft²); consequently, the footprint of the C-724-B facility is \sim 7,829 ft².

A dust collection system is located outside of the northwestern corner of C-724-B. The steel structure supports the saw dust collector which is anchored to four concrete footings. The structure footprint is approximately 9 ft \times 14 ft 8 inches (centerline to centerline of the four footings). The elevations found on Figure 5, Engineering Drawing D-10021-Q, Rev. 1, show the overall height of the structure is approximately 45 to 50 ft.

Additional engineering drawings and an aerial photo are provided in the appendix to this report. Figure A.1., Engineering Drawing D-F-10021-B Rev. 1 Showing C-724-A, and Figure A.2., Engineering Drawing E-A-14342-B Rev 0 Showing C-724-C Women's Change House are included to support the facility designations and locations shown in Figure 1.

7. FUNCTION

The C-724-B facility was used as a carpenter shop from 1958 to 2014. From 2014 to present, C-724-B has been utilized as a garage maintenance area for small mobile equipment.

8. BRIEF HISTORY

C-724-B was constructed in 1956 and became operational in 1958. The C-724-B facility was originally known as the auxiliary maintenance building. It was used as a carpenter shop from 1958 until 2014. C-746-B was leased to the United States Enrichment Corporation in the early 1990s and continued to be used as a carpenter shop until the Paducah Gaseous Diffusion Plant was deleased and returned to DOE in 2014. Since 2014, C-724-B has been utilized as a garage maintenance area for small mobile equipment.

9. OPERATIONAL STATUS

Operating

10. DATES OPERATED

1958 to present

11. SITE/PROCESS DESCRIPTION

C-724-B was used as a carpenter shop from 1958 to 2014. Figure 6 shows the exterior of C-724-B and Figure 7 shows the dust collection system. Since 2014, C-724-B has been utilized as a garage maintenance area for small mobile equipment (e.g., forklifts, skid steers, golf carts) and miscellaneous power equipment. Figure 8 shows small equipment and Figure 9 shows miscellaneous tools in C-724-B. Figure 10 shows the

breakroom which also is used as a storage room and the Lock Shop. The entire facility has been designated as a Radioactive Material Area (RMA) since most of the equipment serviced in C-724-B require the equipment to be maintained in an RMA. Floor drains in the building discharge to the storm-water sewer system.

12. WASTE DESCRIPTION

The primary waste stream that would be generated during D&D of C-724-B would be nonhazardous construction and/or demolition debris. This demolition debris will be comprised primarily of concrete blocks, metal structural components, piping, equipment, and insulation. Wastes such as polychlorinated biphenyl (PCB)-containing liquids and electrical components, non-radioactive Resource Conservation Recovery Act (RCRA) and/or mixed waste sludges or liquids are not anticipated to be generated with exceptions noted below.

Based on information available in the *Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation, Appendix A Volume IV: Paducah Facilities Reports* (DOE 1993), limited infrastructure items remain in the facility (e.g., light fixtures, exit lights, instrumentation panels, alarms) that could potentially contain *de minimis* quantities of regulated items (e.g., mercury, lead, PCBs), which will be removed to the extent practicable during deactivation. Generation of any residual amounts of regulated items will be properly containerized, characterized, and dispositioned in accordance with applicable regulatory requirements. Building materials used for construction could contain lead-based paints and asbestos-containing materials (ACM).

The entire facility has been designated as an RMA since most of the equipment serviced in C-724-B required the equipment to be maintained in an RMA.

13. WASTE QUANTITY

Based on the waste forecast information available in the *Remedial Investigation/Feasibility Study Report* for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky (DOE 2018), the waste volume associated with C-724-B is approximately 2,693 yd³. This volume is assumed to be nonhazardous solid waste.

14. SUMMARY OF ENVIRONMENTAL SAMPLING DATA

Sample location WC-172 is located within a 50-ft boundary of C-724-B (see Figure 11, SWMUs and Sampling Locations near C-724-B). Sample location WC-172 is a water sample collected in 1992 from the collection pit associated with AOC 178, C-724-A Paint Spray Booth, which is located inside C-724-C. See, *Site Evaluation Report for the C-724-C Paint Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2456&D1, for additional information.

15. DESCRIPTION OF RELEASE AND MEDIA AFFECTED

Groundwater:None KnownSurface Water:None KnownSoil:None KnownEcology Affected (i.e., threatened/endangered species):None KnownAir:None Known

There have been no known documented spills or releases of materials reported from this facility to the environment.

16. DOCUMENTATION OF NO RELEASE

There have been no known documented spills or releases of materials reported from this facility to the environment. Minor, isolated spills (e.g., light ballast leak) contained within the building occurred and were immediately cleaned up. The C-724-B facility has not been identified as a SWMU or AOC, nor did it contain any areas designated as a SWMU or AOC. No information was identified warranting the designation of the C-724-B facility, or portions thereof, as a SWMU or AOC.

17. IMPACT ON OR BY OTHER SWMU/AOC

There is no evidence that this facility impacts or is being impacted by other SWMUs/AOCs. AOC 178, C-724-A Paint Spray Booth, is located inside C-724-C. See, *Site Evaluation Report for the C-724-C Paint Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2456&D1, for additional information.

18. PRELIMINARY REMEDIATION GOAL COMPARISON

Not applicable. Sample location WC-172 is located within a 50-ft boundary of C-724-B and is a water sample collected in 1992 from the collection pit associated with AOC 178, C-724-A Paint Spray Booth, which is located inside C-724-C. See, *Site Evaluation Report for the C-724-C Paint Shop at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky*, DOE/LX/07-2456&D1, for additional information.

19. RCRA FACILITY INVESTIGATION NECESSARY

A RCRA Facility Investigation is not recommended as necessary for C-724-B. There is no evidence of a release, or threat of any release, to the environment from the building, and the facility is not believed to pose a risk to human health or the environment.

20. CERCLA NTCRA NECESSARY

A CERCLA NTCRA is not recommended as necessary for demolition of the facility structure. Limited infrastructure items potentially containing *de minimis* quantities of regulated items remaining in the building will be removed, to the extent practicable, during deactivation. Building materials used for construction could contain lead-based paints and ACM, both of which can be verified effectively during a predemolition inspection, contained, and properly managed using standard demolition and waste management practices. Deactivation will include removal of any accessible loose items being stored and designated as RMAs, to the extent practicable, prior to demolition.

October and November 2020 walkdown inspections of the facility, employee interviews, and other reviewed historical information did not identify any unusual conditions that would pose a potential threat of environmental release during future demolition of the aboveground structure; therefore, the demolition and disposal of the facility is recommended to be conducted outside of the FFA and/or CERCLA process.

All applicable laws, regulations, and DOE procedures and/or protocols will be followed to ensure the demolition and disposal of the aboveground structure occurs in a safe, compliant manner, including conducting any additional radiological characterization through confirmation radiological surveys, as necessary, to support demolition and waste disposition.

21. OU ASSIGNMENT

C-724-B currently is assigned to the Facility D&D OU, Other Buildings (non-SWMUs) (SMP Appendix 4) (DOE 2020).

22. REFERENCES

- DOE (U.S. Department of Energy) 1993. Report for Environmental Audit Supporting Transition of the Gaseous Diffusion Plants to the United States Enrichment Corporation, Appendix A Volume IV: Paducah Facilities Reports, DOE/OR/1087&V5, June.
- DOE 1995. Policy on Decommissioning of Department of Energy Facilities under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Joint policy from the U.S. Department of Energy and U.S. Environmental Protection Agency, May 22, 1995.
- DOE 2018. Remedial Investigation/Feasibility Study Report for CERCLA Waste Disposal Alternatives Evaluation at the Paducah Gaseous Diffusion Plant, Paducah, Kentucky, DOE/LX/07-0244&D2/R2, U.S. Department of Energy, Paducah, KY, July.
- DOE 2020. Site Management Plan, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, Annual Revision—FY 2021, DOE/LX/07-2450&D1, U.S. Department of Energy, Paducah, KY, November.
- EPA (U.S. Environmental Protection Agency) 1998. Federal Facility Agreement for the Paducah Gaseous Diffusion Plant, DOE/OR/07-1707, U.S. Environmental Protection Agency, Atlanta, GA, February.

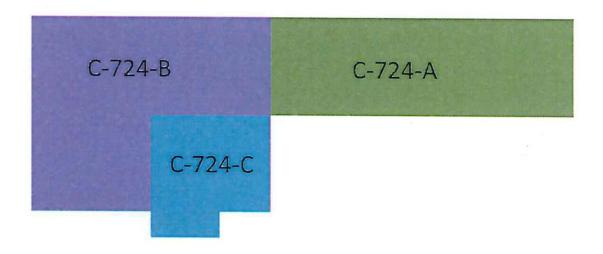


Figure 1. Facility Designation for C-724-A, -B, and -C



Figure 2. Aerial Photograph Showing the C-724-B Carpenter Shop Locattion

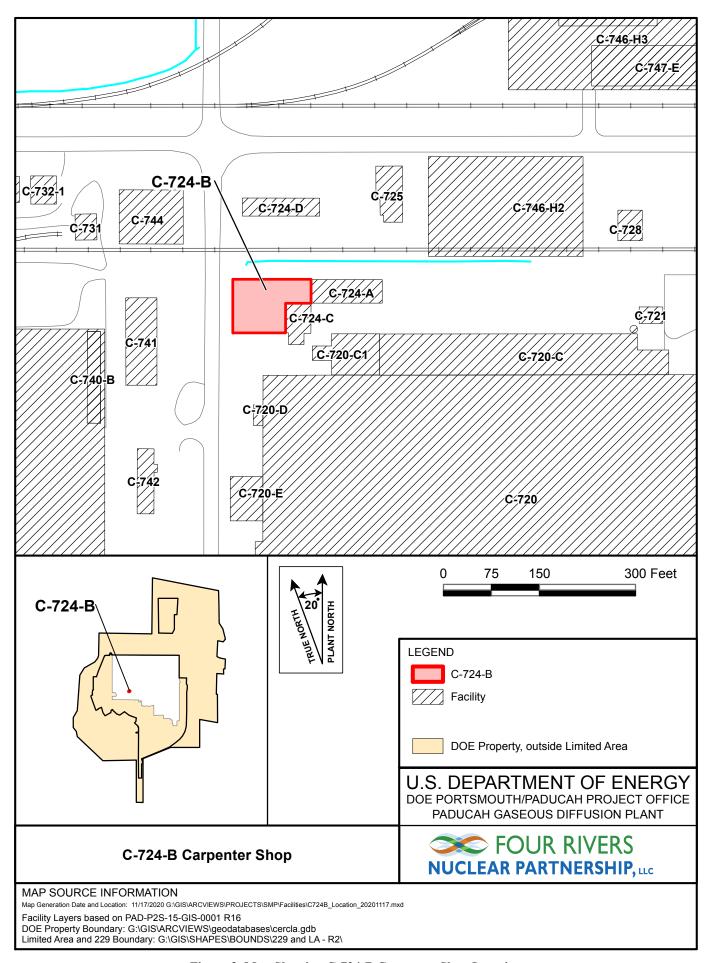


Figure 3. Map Showing C-724-B Carpenter Shop Location

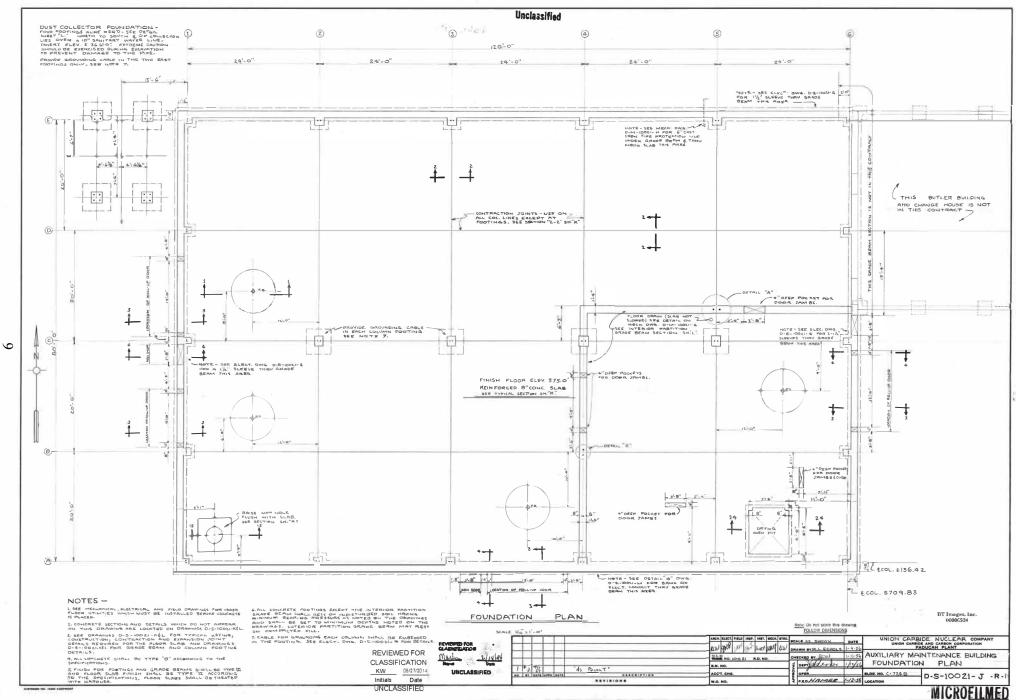


Figure 4. Engineering Drawing D-S-10021-J Rev. 0 of C-724-B and C-724-C

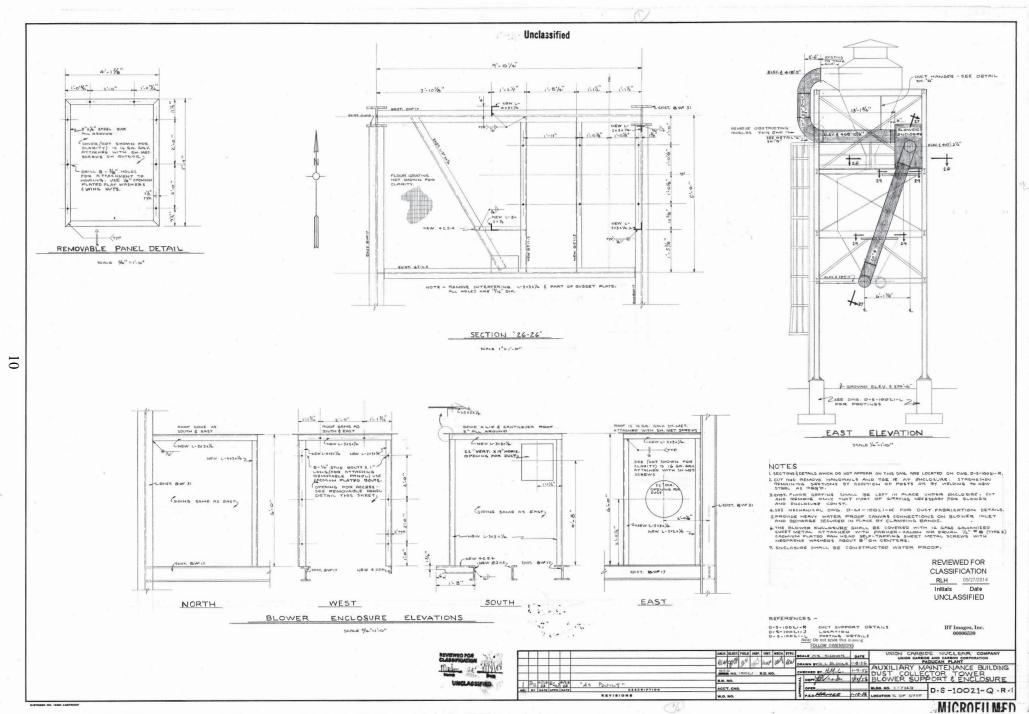


Figure 5. Engineering Drawing D-S-10021-Q Rev. 1 of Dust Collection System



Figure 6. C-724-B Exterior Southwest Corner (Looking North and East)



Figure 7. C-724-B Dust Collection System Located at the Northwest Corner of C-724-B



Figure 8. C-724-B Interior Equipment

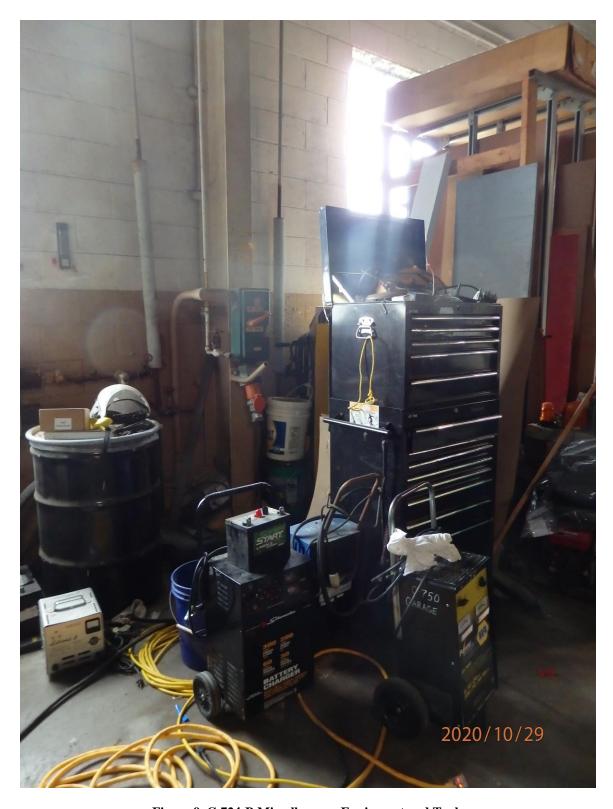


Figure 9. C-724-B Miscellaneous Equipment and Tools



Figure 10. C-724-B Breakroom Storage Room and Lock Shop

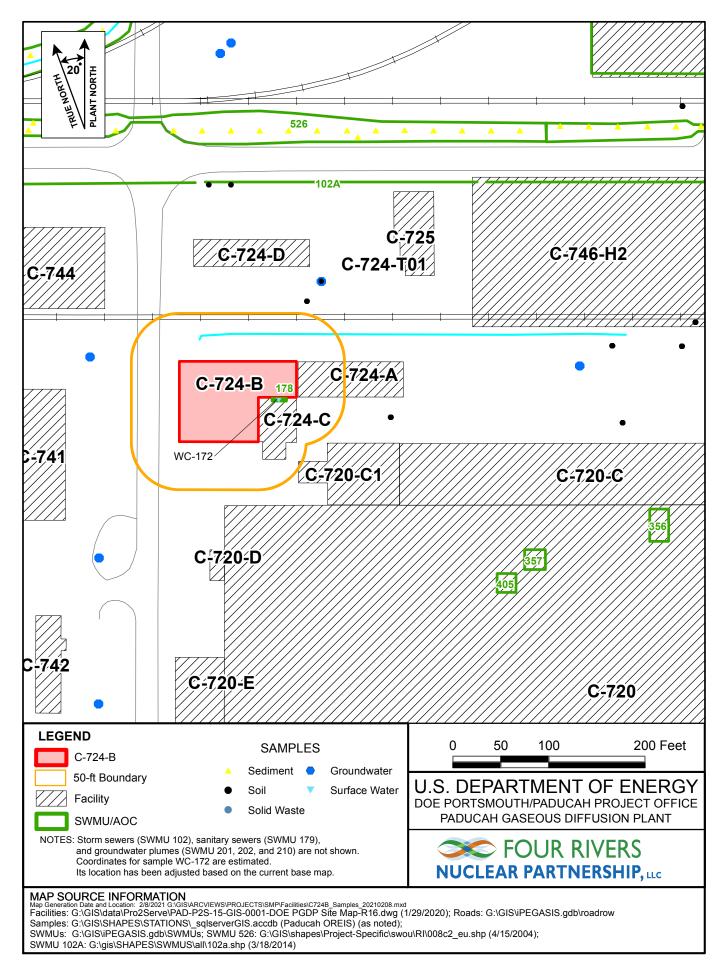
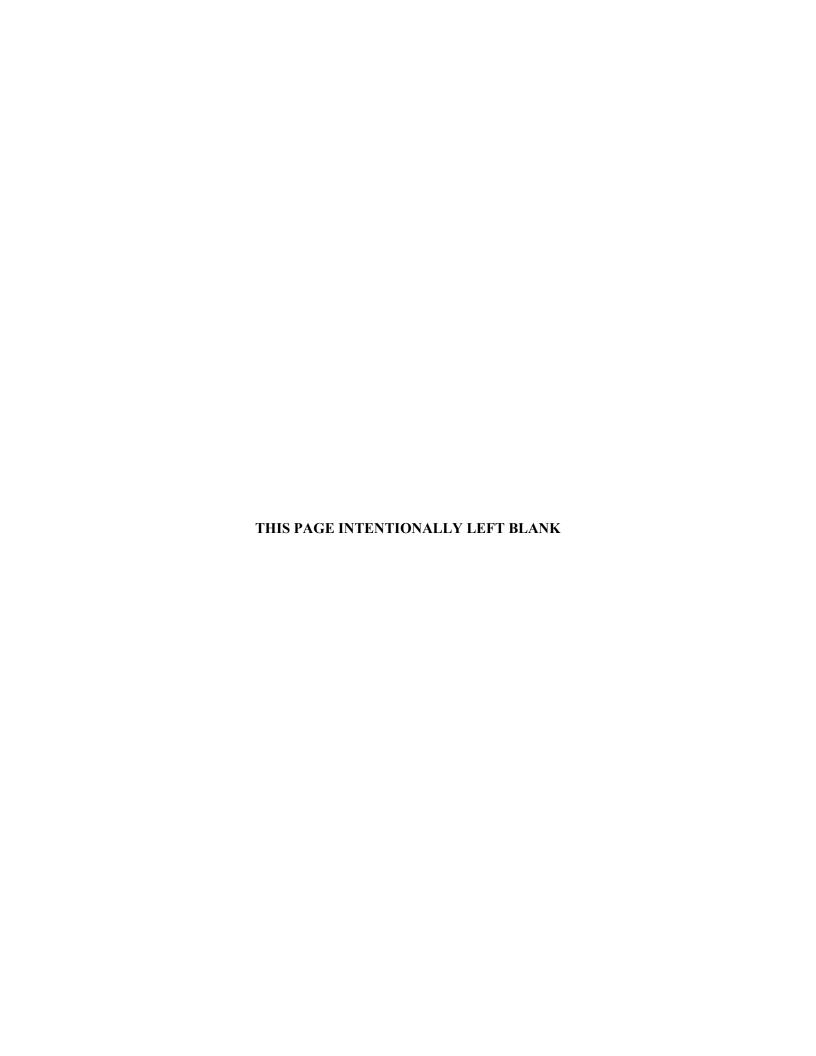


Figure 11. SWMU and Sample Locations near C-724-B

APPENDIX

ENGINEERING DRAWINGS AND AERIAL PHOTOGRAPH



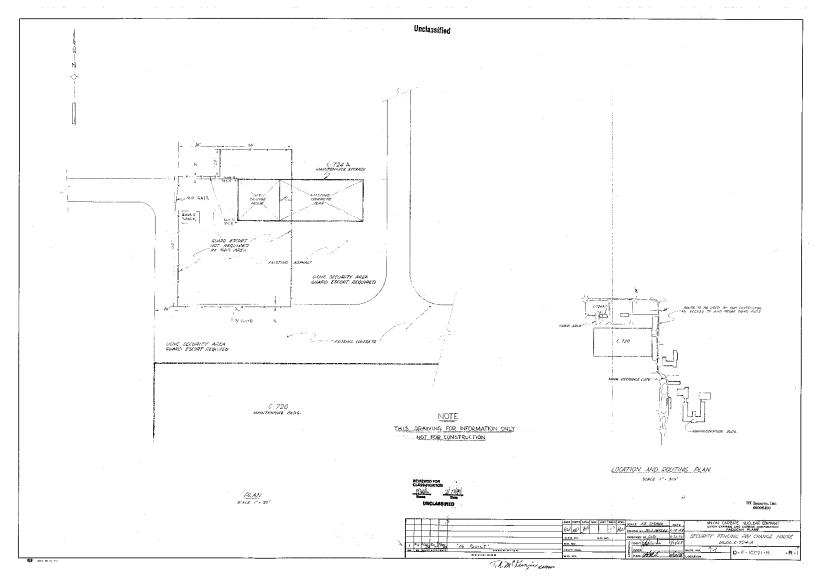


Figure A.1. Engineering Drawing D-F-10021-B Rev. 1 Showing C-724-A

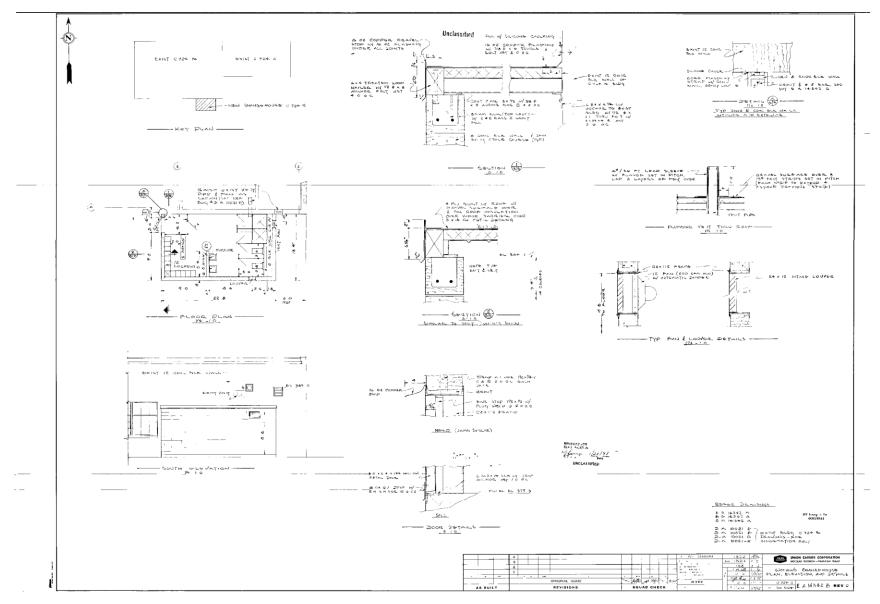


Figure A.2. Engineering Drawing E-A-14342-B Rev 0 Showing C-724-C Women's Change House



Figure A.3. Aerial Photo ADZ-4LL-53 070371

