DRAFT

ASBESTOS CONTAINING MATERIAL SURVEY REPORT

WESTOVER AIR RESERVE BASE
BUILDING 5505
150 RADAR HILL ROAD
CHICOPEE, MA

Prepared For:

Westover ARB – Engineering Division
975 Patriot Avenue, Chicopee, MA 01022

Prepared By:

U.S. Army Corps of Engineers – Louisville District
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AUGUST 2025

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (USACE) Louisville District performed an Asbestos Containing Material (ACM) Survey at Building 5505, located on Radar Hill Road within the western portion of Westover Air Reserve Base (WARB) in Chicopee, MA. The ACM Survey was performed on 30 July 2025, and involved identification, assessment, and sampling of newly identified ACM and the preparation of this comprehensive ACM Survey report. The work was performed for the WARB Engineering Division to support a planned renovation of Building 5505. The work was performed by United States Environmental Protection Agency (USEPA) accredited Asbestos Building Inspector and USEPA accredited Asbestos Management Planner Christian Elslager, in accordance with the following regulations and standards:

- Army Regulation (AR) 200-1, “Environmental Protection and Enhancement,” dated 13 December 2007;
- AR 420-1, “Army Facilities Management,” dated 12 February 2008;
- Asbestos Hazard Emergency Response Act (AHERA) protocols published in 40 Code of Federal Regulations (CFR) Part 763, Subpart E, “Asbestos-Containing Materials in Schools”;
- USEPA Publication 700/B-92/001, “A Guide to Performing Re-inspections under the AHERA,” dated February 1992;
- U.S. Army Center for Public Works Technical Bulletin (PWTB) 420-70-8, “Installation Asbestos Management Program,” dated 23 March 1998; and
- USACE Engineer Pamphlet (EP) 1110-1-22, “Asbestos Surveys and Assessments – Standard Scope of Work,” dated 15 September 2000

The following is description of the inspected structure:

- Building 5505: Constructed in approximately 1963; 1,214 square feet (SF) footprint, one-story, masonry block construction, built slab-on-grade. The structure footprint is roughly “L” shaped with mechanical rooms occupying the southern portion of the building, a radio room occupying the northeast quarter of the building and the remainder consisting of offices and a restroom. Figure 1 (attached) depicts the structure footprint and sample locations. Interior finishes consisted of drywall, painted masonry, vinyl composite tile (VCT), carpet squares, sheet vinyl/linoleum, cellulose ceiling tile and bare concrete. Ethylene Propylene Diene Monomer (EPDM) flat roof.

The facility is located on the western portion of WARB, with Radar Hill Road adjoining to the south. The property slopes from north to south. A paved drive connects Building 5505 with the termination of Radar Hill Road to the west. A parking area occupies the portion of the property along the west side of Building 5505. A skeletal steel radar array was attached to the east side of Building 5505. The building vicinity consisted of grass-covered lawn.

Homogeneous Areas

No previous Asbestos Inspections have been performed on Building 5505. The USACE inspector identified and sampled fifteen (15) separate Homogenous Areas (HA's) during the 30 July 2025 ACM Survey. The identified HA's were in good condition with relatively low exposure risk based on material characteristics (e.g. generally non-friable). The following is a summary of HA's sampled:

- HA-01: Black Roofing Felt Paper
- HA-02: White EPDM Roofing Seam Sealant
- HA-03: EPDM Roofing with Foam Board and Felt Paper
- HA-04: Asphalt Tar on Roof Deck beneath EPDM Roofing
- HA-05: Brown Vinyl Cove Base with Yellow Glue
- **HA-06: 12"X12" Green Vinyl Composite Tile with Black Mastic**
- HA-07: White 2'X4' Ceiling Tile
- HA-08: Drywall
- HA-09: Wood Patterned Linoleum
- HA-10: Tan Vinyl Cove Base with Yellow Glue
- HA-11: White Flexible Vinyl Tile with Black Mastic
- HA-12: White 2'X2' Ceiling Tile
- HA-13: White Exterior Door Caulk
- HA-14: White Exterior Louver Hood Caulk
- HA-15: White Exterior Window Caulk

Throughout this report, **Bold** text indicates *laboratory confirmed ACM*.

Asbestos-Containing Materials

Only one of the HA's sampled during the 30 July 2025 inspection was found to be ACM by laboratory analysis (HA-06 – 12"X12" Green VCT and Black Mastic). The samples were analyzed using polarized light microscopy (PLM) coupled with dispersion staining, as described in 40 CFR Part 763 and the National Emissions Standard for Hazardous Air Pollutants (NESHAPS), following EPA Method 600/R-93/116. The samples were analyzed at EMSL Analytical Laboratories (EMSL) under the NVLAP Lab Code 200188-0 (Appendix C).

ACM may be present in additional areas not sampled or available to be sampled during the investigation, and it is recommended that an EPA AHERA accredited building inspector collect bulk samples of previously unsampled suspect ACM if encountered and have them tested and confirmed by recognized laboratory methods prior to any renovation and/or demolition of the buildings.

Conclusions and Recommendations

All accessible areas of Building 5505 were inspected, and the current condition of ACM was assessed. One HA was indicated to be ACM (>1% asbestos) by laboratory analysis.

Prior to the proposed renovation of Building 5505, the affected ACM should be removed in accordance with Army Regulation(AR) 200-1, Environmental Protection and Enhancement, dated 13 December 2007; Department of the Army; U.S. Army Center for Public Works Technical Bulletin (PWTB) 420-70-8, Installation Asbestos Management Program, dated 23 Match 1998; Department of the Army, U.S. Army Corp of Engineers, Engineer Pamphlet (EP) 1110-1-22, Engineer and Design - Asbestos Survey and Assessments Standard Scope of Work, dated 15 September 2000; and applicable federal, state, and local regulations and standards.

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ACRONYMS AND ABBREVIATIONS

ACM	Asbestos Containing Material(s)
AHERA	Asbestos Hazard Emergency Response Act
CFR	Code of Federal Regulations
CMU	Concrete Masonry Unit
EPA	Environmental Protection Agency
HA	Homogeneous Area
LF	Linear Feet
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NVLAP	National Voluntary Laboratory Accreditation Program
PLM	Polarized Light Microscopy
PWTB	Public Works Technical Bulletin
SF	Square Feet
US	United States
USACE	United States Army Corps of Engineers
VCT	Vinyl Composite Tile
MA	Massachusetts

1.0 INTRODUCTION

The U.S. Army Corps of Engineers (USACE) Louisville District has performed this Asbestos Containing Material (ACM) Survey at Building 5505, located on Radar Hill Road within the western portion of Westover Air Reserve Base (WARB) in Chicopee, MA and is hereafter referred to as the "Property". The purpose of this ACM Survey was identification, assessment, and sampling of suspect ACM and preparation of a comprehensive ACM Survey report. The ACM Survey was performed on 30 July 2025 by accredited inspector/management planner Christian Elslager. This effort is being conducted to support a planned renovation of the facility.

The following is description of the inspected structure:

- Building 5505: Constructed in approximately 1963; 1,214 square feet (SF) footprint, one-story, masonry block construction, built slab-on-grade. The structure footprint is roughly "L" shaped with mechanical rooms occupying the southern portion of the building, a radio room occupying the northeast quarter of the building and the remainder consisting of offices and a restroom. Figure 1 (attached) depicts the structure footprint and sample locations. Interior finishes consisted of drywall, painted masonry, vinyl composite tile (VCT), carpet squares, sheet vinyl/linoleum, cellulose ceiling tile and bare concrete. EPDM flat roof.

1.1 Purpose of an Asbestos Containing Material Survey Report

Westover ARB requires a comprehensive asbestos inspection of Building 5505 in preparation for a planned renovation. The intent of the ACM Survey is to evaluate the building for ACM that requires abatement prior to renovation.

There is a known link between the inhalation of asbestos fibers and various diseases such as asbestosis, mesothelioma, lung and other cancers. As a result, the Asbestos Hazard Emergency Response Act (AHERA), published in 40 Code of Federal Regulations (CFR) Part 763, Asbestos-Containing Materials In Schools, was enacted in 1986 and specifically to address asbestos in schools. An AHERA inspection requires an accredited inspector to visually inspect and assess the condition of all known or assumed asbestos-containing building materials, touch it to determine friability, and identify homogeneous areas of materials. There is no requirement for facility re-inspection for non-school buildings in AHERA. The National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR Part 61 Subpart M enacted 1984 April 5, unless otherwise noted, require thorough inspections for asbestos in structures before renovation or demolition. Army regulation (AR) 200-1 dated 2007 December 12, Environmental Protection and Enhancement, Section 9.2 states "Army installations will perform an exposure assessment and risk assessment for all locations containing asbestos."

1.2 ACM Definition

The United States Environmental Protection Agency (USEPA), per the Title 40 Code of Federal Regulations (CFR) Part 61, Subpart M, defines an ACM as a material that contains one percent (1%) or more asbestos using polarized light microscopy (PLM). The confirmed or assumed ACM within each HA are to be categorized based on the friability of the material. The categories of regulated ACM are described as follows:

• Friable ACM – any material containing more than 1 percent asbestos, as determined by PLM analysis, and that can be crumbled, pulverized, or reduced to powder under hand pressure when dry.
• Category I non-friable ACM – packing material, gaskets, resilient floor covering (except vinyl sheet flooring products), and asphalt roofing products that contain greater than 1 percent asbestos.
• Category II non-friable ACM – any material, except for Category I Non-friable ACM, that contains greater than 1 percent asbestos and cannot be reduced to powder by hand pressure when dry.

1.3 Regulated ACM

According to USEPA's National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulation *Asbestos-Containing Materials Guidance USEPA-340/1-90-018* (USEPA, December 1990) for building renovations and demolitions, ACM becomes regulated if the ACM is:

1. Friable
2. Category I non-friable ACM that is in poor condition and becomes friable
3. Category I or II non-friable ACM that will be or has been subjected to sanding, grinding, cutting and/or abrading
4. Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized and/or reduced to powder by the forces expected to act on the material in the course of demolition or building renovation operations. Further, Category II non-friable ACM (e.g., cement siding and transite board shingles) subjected to intense weather conditions such as thunderstorms, high winds and/or prolonged exposure to high heat and humidity may become "weathered" to a point where they become friable.

1.4 Abatement

According to NESHAP (40 CFR § 61.145), friable or potentially friable ACM that will be disturbed and/or has the potential to be disturbed during renovation must be removed. A licensed asbestos inspector should be consulted prior to any renovation operations in a building or other structure containing ACM.

In Massachusetts (MA) regulated structures:
1. A MA-licensed asbestos project designer shall design the asbestos abatement.
2. A MA-licensed asbestos abatement contractor shall perform the abatement.
3. A MA-licensed company shall monitor the abatement.

2.0 ASBESTOS CONTAINING MATERIAL SURVEY APPROACH

The ACM Survey was performed in accordance with the AHERA protocols published in 40 CFR Part 763, “Asbestos-Containing Materials In Schools”; the U.S. Environmental Protection Agency (EPA) publication 700/B-92/001, “A Guide to Performing Re-Inspections under AHERA”, EPA Publication 700/B-92/001, dated 1992 February; and pursuant to the applicable requirements of the U.S. Army Center for Public Works Technical Bulletin No. 420-70-8, Installation Asbestos Management Program dated 1998 March. This ACM Survey was performed to prepare for a planned renovation of the building.

- **Document Review** - A review of previously completed asbestos inspection reports and/or abatement reports and information concerning facility construction, maintenance, and management history. No prior ACM Surveys have been performed on Building 5505; therefore, no document review was incorporated into this scope of work.
- **Inspection** - A facility walk-through and visual survey to inspect and assess ACMs. Photographic documentation, located in Appendix E, was used to document the current condition of suspect ACM.
- **Sampling** – Samples were collected from suspect materials and submitted for laboratory analysis according to appropriate methods and procedures.

3.0 SITE INFORMATION

3.1 Installation Name and Location

Facility Name: Building 5505

Facility ID Number: 5505

Facility Address: 150 Radar Hill Road, WARB, Chicopee, MA 01022

3.2 Facility Point of Contact

Facility Point of Contact: Richard Colburn

Point of Contact Title: Chief of Design

Point of Contact Phone: (413) 557-2433

Point of Contact Email: richard.colburn.1@us.af.mil

3.3 Inspection Information

Inspector/Management Planner: Christian Elslager

Inspector License Number and Expiration Date of License EPA: Indiana Department of Environmental Management, Asbestos Inspector License #19A012555

Affiliation: U.S. Army Corps of Engineers, Louisville District (LRL)

Address: 600 Dr. Martin Luther King Jr. Place Louisville, KY 40201-0059

Phone Number: (502) 315-7083

Email: christian.j.elslager@usace.army.mil

Inspection Date(s): 30 July 2025

3.4 Facility Building(s) Information

Building 5505: Constructed in approximately 1963; 1,214 square feet (SF) footprint, one-story, masonry block construction, built slab-on-grade. The structure footprint is roughly “L” shaped with mechanical rooms occupying the southern portion of the building, a radio room occupying the northeast quarter of the building and the remainder consisting of offices and a restroom. Figure 1 (attached) depicts the structure footprint and sample locations. Interior finishes consisted of drywall, painted masonry, vinyl composite tile (VCT), carpet squares, sheet vinyl/linoleum, cellulose ceiling tile and bare concrete. EPDM flat roof.

4.0 ASBESTOS SURVEY FINDINGS

4.1 Inspection and Sampling

The USACE inspector identified and sampled fifteen (15) separate HA's during the 30 July 2025 ACM Survey. The identified HA's were in good condition with relatively low exposure risk based on material characteristics (e.g. generally non-friable). The following is a summary of HA's sampled:

- HA-01: Black Roofing Felt Paper
- HA-02: White EPDM Roofing Seam Sealant
- HA-03: EPDM Roofing with Foam Board and Felt Paper
- HA-04: Asphalt Tar on Roof Deck beneath EPDM Roofing
- HA-05: Brown Vinyl Cove Base with Yellow Glue
- **HA-06: 12"X12" Green Vinyl Composite Tile with Black Mastic**
- HA-07: White 2'X4' Ceiling Tile
- HA-08: Drywall
- HA-09: Wood Patterned Linoleum
- HA-10: Tan Vinyl Cove Base with Yellow Glue
- HA-11: White Flexible Vinyl Tile with Black Mastic
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- HA-13: White Exterior Door Caulk
- HA-14: White Exterior Louver Hood Caulk
- HA-15: White Exterior Window Caulk

Throughout this report, **Bold** text indicates *laboratory confirmed ACM*.

The United States Environmental Protection Agency (USEPA), per the Title 40 Code of Federal Regulations (CFR) Part 61, Subpart M, defines an ACM as a material that contains one percent (1%) or more asbestos using polarized light microscopy (PLM).

Laboratory results are provided in a Table in Appendix A and the Analytical Laboratory Report is attached in Appendix B. Sample location drawings are shown on Appendix D with Asbestos Containing Materials (ACMs) depicted with red text. The samples were analyzed using PLM coupled with dispersion staining, as described in 40 CFR Part 763 and the NESHAP, following EPA Method 600/R-93/116. The samples were analyzed at EMSL Analytical Laboratories (EMSL) under the NVLAP Lab Code 200188-0 (Appendix C).

5.0 CONCLUSIONS AND RECOMMENDATIONS

An ACM Survey was conducted at the Property. During the 30 July inspection, the USACE Louisville inspector identified fifteen (15) HAs. Asbestos was detected in only one (1) HA sampled: HA-06 – 12”X12” Green VCT w/ Black Mastic.

The remaining HAs are non-ACM and do not require corrective actions. Reasonable inspection methods and techniques were employed to perform the ACM Survey. ACM may be present in additional areas not sampled or available to be sampled during the investigation, and it is recommended that any suspect ACM found at a later date be tested and confirmed by recognized laboratory methods, and licensed EPA AHERA professional prior to any renovation and/or demolition of the building.

6.0 LIMITATIONS AND CERTIFICATIONS

This ACM Survey report was prepared by the USACE Louisville District for use Westover ARB. This report, and the supporting data, findings, conclusions, opinions, and recommendations it contains represent the result of USACE efforts within this environmental investigation work. Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of the site visit, and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which USACE is unaware and has not had the opportunity to evaluate. The information presented in this report contains professional opinions based solely upon USACE's visual observations, laboratory test data, and current regulatory requirements. These conclusions are intended exclusively for the purpose stated herein, at the site indicated, and for the project indicated.

7.0 POINTS OF CONTACT

Please direct any questions to Christian Elslager or Shelton Poole, by phone at (502) 315-7083 or (502) 315-6290, respectively, or email at Christian.j.elslager@usace.army.mil or Shelton.M.Poole@usace.army.mil

ELSLAGER.CHRISTIAN.JAMES.1609969420

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Date: 2025.08.19 12:07:07 -04'00'

08/19/2025

Christian Elslager
Physical Scientist
U.S. Army Corps of Engineers
Louisville District

Date

POOLE.SHELTON.M.1230563604

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Date: 2025.08.19 13:43:28 -04'00'

08/19/2025

Shelton Poole
Environmental Branch Chief
U.S. Army Corps of Engineers
Louisville District

Date

APPENDICES

APPENDIX A
SAMPLE ANALYSIS SUMMARY

Appendix A- Asbestos Sample Analysis Summary

Homo-genous Area (HA #)	Sample Number	Material	Sample Location	PLM Result
HA-01	1A	Black Felt Flashing	Roof, SE Corner, pipe penetration	NAD
HA-02	2A	White Flexible Roof Seam Sealer	Roof, SE Corner, near E side	NAD
HA-03	3A	EPDM Roofing, with Foam Board and Roofing Felt	Roof, SE Corner	NAD
HA-04	4A	Tar on Roof Deck under EPDM Roofing	Roof, SE Corner	NAD
HA-05	5A	Brown Vinyl Cove Base w/ Yellow Glue	Office 101-1, Closet	NAD
	5B		Office 103-1, N Wall	NAD
	5C		Office 103-1, S Wall	NAD
HA-06	**6A**	**12”x12” Green Vinyl Composite Tile w/ Black Mastic**	**Office 101-1, Closet**	**3% Chrysotile (VCT), 3% Chrysotile (Mastic)**
HA-07	7A	White 2’x4’ Ceiling Tile	Office 100-1, W Side	NAD
	7B		Office 103-1, N Side	NAD
	7C		Office 103-1, S Side	NAD
HA-08	8A	Drywall	Office 101-1, Closet	NAD
	8B		Restroom, N Wall	NAD
	8C		Office 103-1, S Wall	NAD
HA-09	9A	Wood Patterned Linoleum	Restroom, W Side	NAD
	9B		Restroom, NE Corner	NAD
	9C		Restroom, SE Corner	NAD
HA-10	10A	Tan Vinyl Cove Base w/ Yellow Glue	Restroom, N Wall	NAD
	10B		Restroom, W Wall	NAD
	10C		Restroom, E Wall	NAD
HA-11	11A	White Flexible Vinyl Floor Tile w/ Black Mastic	Office 108-1, NE Corner	NAD
	11B		Office 108-1, SW Corner	NAD
	11C		Office 108-1, Center	NAD
HA-12	12A	White 2’x2’ Ceiling Tile	Office 108-1, SW Corner	NAD
	12B		Office 108-1, NE Corner	NAD
HA-13	13A	White Exterior Door Caulk	W Exterior Mechanical Room Door	NAD
HA-14	14A	White Exterior Louver Hood Caulk	W Wall Louver Hood	NAD
	14B		S Wall Louver Hood	NAD
HA-15	15A	White Exterior Window Caulk	E Wall Center	NAD

NAD = No Asbestos Detected by PLM
NA/PS = Not Analyzed/Positive Stop
NA = Not Applicable
Bold = Positive for ACM

APPENDIX B
LAB ANALYSIS REPORT

EMSL Analytical, Inc.

6340 CastlePlace Dr. Indianapolis, IN 46250

Tel/Fax: (317) 803-2997 / (317) 803-3047

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EMSL Order: 162510032
Customer ID: USEL75
Customer PO:
Project ID:

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600 Dr. Martin Luther King Jr Place
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Project: US Army Reserves-Westover AFB

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Received Date: 08/06/2025 10:07 AM
Analysis Date: 08/13/2025
Collected Date:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1A *162510032-0001*	Felt Flashing, Black	Black Non-Fibrous Homogeneous	HA: HA-1	100% Non-fibrous (Other)	None Detected
2A *162510032-0002*	White Flexible,Roofing Seam Sealer	White Non-Fibrous Homogeneous	HA: HA-2	100% Non-fibrous (Other)	None Detected
3A-Roofing *162510032-0003*	EPDM Roofing w/ Foam Board	Black Non-Fibrous Homogeneous	HA: HA-3	100% Non-fibrous (Other)	None Detected
3A-Foam Board *162510032-0003A*	EPDM Roofing w/ Foam Board	Yellow Non-Fibrous Homogeneous	HA: HA-3	100% Non-fibrous (Other)	None Detected
3A-Felt *162510032-0003B*	EPDM Roofing w/ Foam Board	Gray/Black Fibrous Homogeneous	95% Cellulose <1% Glass HA: HA-3	5% Non-fibrous (Other)	None Detected
4A *162510032-0004*	Black Tar on Roof Deck	Black Non-Fibrous Homogeneous	HA: HA-4	100% Non-fibrous (Other)	None Detected
5A-Vinyl Cove Base *162510032-0005*	Brown Vinyl Cove Base w/ yellow glue	Brown Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected
5A-Glue *162510032-0005A*	Brown Vinyl Cove Base w/ yellow glue	Tan/Yellow Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected
5B-Vinyl Cove Base *162510032-0006*	Brown Vinyl Cove Base w/ yellow glue	Brown Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected
5B-Glue *162510032-0006A*	Brown Vinyl Cove Base w/ yellow glue	Tan/Yellow Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected
5C-Vinyl Cove Base *162510032-0007*	Brown Vinyl Cove Base w/ yellow glue	Brown Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected
5C-Glue *162510032-0007A*	Brown Vinyl Cove Base w/ yellow glue	Tan/Yellow Non-Fibrous Homogeneous	HA: HA-5	100% Non-fibrous (Other)	None Detected

Initial report from: 08/13/2025 14:03:39

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EMSL Order: 162510032
Customer ID: USEL75
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
6A-Vinyl Composite Tile *162510032-0008*	Green Vinyl Composet Tile w/ Black Mastic	Brown/Black Non-Fibrous Homogeneous	HA: HA-6	97% Non-fibrous (Other)	**3% Chrysotile**
6A-Mastic *162510032-0008A*	Green Vinyl Composet Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	HA: HA-6	97% Non-fibrous (Other)	**3% Chrysotile**
7A *162510032-0009*	2'x4' White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool HA: HA-7	15% Perlite 5% Non-fibrous (Other)	None Detected
7B *162510032-0010*	2'x4' White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool HA: HA-7	15% Perlite 5% Non-fibrous (Other)	None Detected
7C *162510032-0011*	2'x4' White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool HA: HA-7	15% Perlite 5% Non-fibrous (Other)	None Detected
8A *162510032-0012*	Drywall	Brown/White Fibrous Heterogeneous	30% Cellulose 2% Glass HA: HA-8	60% Gypsum 8% Non-fibrous (Other)	None Detected
8B *162510032-0013*	Drywall	Brown/White Fibrous Heterogeneous	30% Cellulose HA: HA-8	65% Gypsum 5% Non-fibrous (Other)	None Detected
8C *162510032-0014*	Drywall	Brown/White Fibrous Heterogeneous	35% Cellulose HA: HA-8	60% Gypsum 5% Non-fibrous (Other)	None Detected
9A *162510032-0015*	Wood Pattern Linoleum	Brown Fibrous Heterogeneous	25% Cellulose HA: HA-9	75% Non-fibrous (Other)	None Detected
9B *162510032-0016*	Wood Pattern Linoleum	Brown Fibrous Heterogeneous	25% Cellulose HA: HA-9	75% Non-fibrous (Other)	None Detected
9C *162510032-0017*	Wood Pattern Linoleum	Brown Fibrous Heterogeneous	30% Cellulose HA: HA-9	70% Non-fibrous (Other)	None Detected
10A-Vinyl Cove Base *162510032-0018*	Tan Vinyl Cove Base w/ yellow glue	Tan Non-Fibrous Homogeneous	HA: HA-10	100% Non-fibrous (Other)	None Detected
10A-Glue *162510032-0018A*	Tan Vinyl Cove Base w/ yellow glue	White/Yellow Non-Fibrous Homogeneous	HA: HA-10	100% Non-fibrous (Other)	None Detected
10B-Vinyl Cove Base *162510032-0019*	Tan Vinyl Cove Base w/ yellow glue	Tan Non-Fibrous Homogeneous	HA: HA-10	100% Non-fibrous (Other)	None Detected
10B-Glue *162510032-0019A*	Tan Vinyl Cove Base w/ yellow glue	White/Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 08/13/2025 14:03:39

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Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos % Fibrous	Non-Asbestos % Non-Fibrous	Asbestos % Type
			HA: HA-10		
10C-Vinyl Cove Base *162510032-0020*	Tan Vinyl Cove Base w/ yellow glue	Tan Non-Fibrous Homogeneous	HA: HA-10	100% Non-fibrous (Other)	None Detected
10C-Glue *162510032-0020A*	Tan Vinyl Cove Base w/ yellow glue	White/Yellow Non-Fibrous Homogeneous	HA: HA-10	100% Non-fibrous (Other)	None Detected
11A-Vinyl Tile *162510032-0021*	White Vinyl Tile w/ Black Mastic	White/Blue Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11A-Mastic *162510032-0021A*	White Vinyl Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11B-Vinyl Tile *162510032-0022*	White Vinyl Tile w/ Black Mastic	White/Blue Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11B-Mastic *162510032-0022A*	White Vinyl Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11C-Vinyl Tile *162510032-0023*	White Vinyl Tile w/ Black Mastic	White/Blue Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11C-Mastic *162510032-0023A*	White Vinyl Tile w/ Black Mastic	Black Non-Fibrous Homogeneous	HA: HA-11	100% Non-fibrous (Other)	None Detected
11C-Leveler *162510032-0023B*	White Vinyl Tile w/ Black Mastic	Gray Non-Fibrous Homogeneous	HA: HA-11	20% Quartz 80% Non-fibrous (Other)	None Detected
12A *162510032-0024*	2'x2' White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool HA: HA-12	15% Perlite 5% Non-fibrous (Other)	None Detected
12B *162510032-0025*	2'x2' White Ceiling Tile	Gray/White Fibrous Homogeneous	60% Cellulose 20% Min. Wool HA: HA-12	15% Perlite 5% Non-fibrous (Other)	None Detected
13A *162510032-0026*	White Door Caulk Exterior	White Non-Fibrous Homogeneous	HA: HA-13	100% Non-fibrous (Other)	None Detected
14A *162510032-0027*	White Louver Caulk, Exterior	White Non-Fibrous Homogeneous	HA: HA-14	100% Non-fibrous (Other)	None Detected
14B-Caulk *162510032-0028*	White Louver Caulk, Exterior	White Non-Fibrous Homogeneous	HA: HA-14	100% Non-fibrous (Other)	None Detected

Initial report from: 08/13/2025 14:03:39

EMSL Analytical, Inc.
6340 CastlePlace Dr. Indianapolis, IN 46250
Tel/Fax: (317) 803-2997 / (317) 803-3047
http://www.EMSL.com / indianapolislab@emsl.com

EMSL Order: 162510032
Customer ID: USEL75
Customer PO:
Project ID:

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
14B-Foam *162510032-0028A*	White Louver Caulk, Exterior	Yellow Non-Fibrous Homogeneous	HA: HA-14	100% Non-fibrous (Other)	None Detected
15A *162510032-0029*	White Window Caulk, Exterior	White Non-Fibrous Homogeneous	HA: HA-15	100% Non-fibrous (Other)	None Detected

Analyst(s)
Hilary Jarvis (30)
Ross Matlock (13)

Asbestos Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 “Interim Method”) but augmented with procedures outlined in the 1993 (”final”) version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN NVLAP Lab Code 200188-0, AZ0939, CA 2575, CO AL-15132, TX 300262, A2LA Accredited - Certificate #2845.25

Initial report from: 08/13/2025 14:03:39

OrderID: 162510032

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: ~~162510~~ 162510032

EMSL ANALYTICAL, INC.
6340 CASTLEPLACE DR.
INDIANAPOLIS IN, 46250
713-686-3635 P
713-686-3645 F

Company : US Army Corps of Engineers	EMSL-Bill to: ☒ Same ☐ Different If Bill to is Different note instructions in Comments**
Street: 600 Dr Martin Luther King Jr Place	*Third Party Billing requires written authorization from third party*
City: Louisville / State/Province: KY	Zip/Postal Code: 40202 / Country: USA
Report To (Name): Christian Elslager	Fax #:
Telephone #: 502-513-7083	Email Address: christian.j.elslager@usace.army.mil
Project Name/Number: US Army Reserves - Westover AFB	
Please Provide Results: ☐ Fax ☒ Email / Purchase Order:	U.S. State Samples Taken: ~~PT~~ MA

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour ☐ 6 Hour ☐ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☒ 1 Week ☐ 2 Week

**For TEM Air 3 hr through 6 hr, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air	TEM – Air ☐ 4-4.5hr TAT (AHERA only)	TEM- Dust
☐ NIOSH 7400	☐ AHERA 40 CFR, Part 763	☐ Microvac - ASTM D 5755
☐ w/ OSHA 8hr. TWA	☐ NIOSH 7402	☐ Wipe - ASTM D6480
PLM - Bulk (reporting limit)	☐ EPA Level II	☐ Carpet Sonication (EPA 600/J-93/167)
☒ PLM EPA 600/R-93/116 (<1%)	☐ ISO 10312	**Soil/Rock/Vermiculite**
☐ PLM EPA NOB (<1%)	**TEM - Bulk**	☐ PLM CARB 435 - A (0.25% sensitivity)
Point Count	☐ TEM EPA NOB	☐ PLM CARB 435 - B (0.1% sensitivity)
☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ NYS NOB 198.4 (non-friable-NY)	☐ TEM CARB 435 - B (0.1% sensitivity)
Point Count w/Gravimetric	☐ Chatfield SOP	☐ TEM CARB 435 - C (0.01% sensitivity)
☐ 400 (<0.25%) ☐ 1000 (<0.1%)	☐ TEM Mass Analysis-EPA 600 sec. 2.5	☐ EPA Protocol (Semi-Quantitative)
☐ NYS 198.1 (friable in NY)	**TEM – Water:** EPA 100.2	☐ EPA Protocol (Quantitative)
☐ NYS 198.6 NOB (non-friable-NY)	Fibers >10µm ☐ Waste ☐ Drinking	**Other:**
☐ NIOSH 9002 (<1%)	All Fiber Sizes ☐ Waste ☐ Drinking	☐

☒ **Check For Positive Stop – Clearly Identify Homogenous Group**

Samplers Name: Christian Elslager **Samplers Signature:** [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1A	Felt Flashing, Black	HA-1	7/30/2025
2A	White Flexible Roofing Seam Sealer	HA-2	↓
3A	EPDM Roofing w/ Foam Board	HA-3	↓
4A	Black Tar on Roof Deck	HA-4	↓
5A,B,C	Brown Vinyl Cove Base w/ yellow glue	HA-5	↓
6A	Green Vinyl/Composite Tile w/ Black Mastic	HA-6	↓
7A,B,C	2'x4' White Ceiling Tile	HA-7	↓
8A,B,C	Drywall	HA-8	↓

Client Sample # (s): 1A-15A **Total # of Samples:** 29

Relinquished (Client): [signature] **Date:** 8/4/2025 **Time:** 1300

Received (Lab): [signature] **Date:** 8/4/25 **Time:** 10:07A

Controlled Document – Asbestos COC – R2 – 1/12/2010

OrderID: 162510032

Comments/Special Instructions:

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EM Page 2 of 2 pages Only):

10032

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
9 A,B,C	Wood Pattern Linoleum	HA-9	7/30/2025
10 A,B,C	Tan Vinyl/Cove Base w/ Yellow glue	HA-10	
11 A,B,C	White Vinyl/Tile w/ Black Mastic	HA-11	
12 A,B	2'x2' white Ceiling Tile	HA-12	
13 A	White Door Caulk, exterior	HA-13	
14 A,B	White Louver Caulk, exterior	HA-14	
15 A	White Window Caulk, exterior	HA-15	

*Comments/Special Instructions:

Controlled Document – Asbestos COC – R2 – 1/12/2010

APPENDIX C
PERSONNEL AND LABORATORY CREDENTIALS

Indiana Department of Environmental Management
100 N. Senate Avenue
Mail Code 61-52 IGCN 1003
Indianapolis, IN 46204-2251

January 16, 2025

000005

Christian J. Elslager
US Army Corps of Engineers
[redacted]
Georgetown IN 47122

Re: Asbestos Inspector # 19A012555

Based upon the review of your license application, the Office of Air Quality has determined that you have fulfilled the requirements of 326 IAC 18 and are eligible for licensing in the following discipline:

Asbestos Inspector

Your Asbestos Inspector license is attached below. The license is waterproof and tear resistant. Please sign your license and do not laminate or alter your license in anyway. Your license must be available for review at all times while implementing an asbestos project. This license may be revoked, pursuant to 326 IAC 18-2.1-5, if you:

(1) Violate any requirements of these rules (326 IAC 18), 326 IAC 14-10, or any requirement of the Asbestos-Containing Materials in Schools Rule or any other federal, state, or local regulation pertaining to asbestos in buildings or to asbestos projects.
(2) Falsify information on your application for licensing.
(3) Fail to meet any qualifications specified in 326 IAC 18-2.1-2.
(4) Conduct asbestos project, or related asbestos handling activity, in a manner which is hazardous to the public health.

Your license is valid effective 02/17/2025, and will expire on 02/17/2026, as indicated on your card. NOTE: 326 IAC 18-2.1-2 and 326 IAC 18-2.1-4(e) require that any individual who has a twenty-four (24) month lapse between any two training courses of the same discipline to attend an initial training course for the discipline in which they are seeking a license. In order to avoid re-taking the initial training course you must have attended a refresher in the discipline you are seeking a license within twenty-four (24) months from the date of issuance of your last training course certificate.

Office of Air Quality, Asbestos Licensing Section (317) 233-3861

Indiana Dept. of Environmental Management

Christian J. Elslager

Asbestos Inspector License #: 19A012555

Effective: **02/17/2025**	Expiration: **02/17/2026**
Birth Date: **07/10/1975**	Gender: **M**
Height: **5-07**	Eye Color: **Blue**
Weight: **180**	Hair Color: **Brown**

PLA011601-49124_Cards-0000001-0000001-1Page

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AIR-010825-00016

Christian Elslager

has on 01-08-2025 attended and successfully completed the requirements and passed the examination with a score of 70% or better on the entitled course.

ASBESTOS INSPECTOR REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky, the Indiana Department of Environmental Management, Tennessee Department of Environment & Conservation and The Arkansas Department of Environmental Quality. The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Expiration Date: 01-08-2026

Name – Training Manager

Name - Instructor

ENVIRONMENTAL TRAINING CONCEPTS, INC
P.O Box 99603 Louisville, KY 40269
(502)640-2951

Certification Number: ETC-AMPR-010825-00018

Christian Elslager

has on 01-08-2025, attended and successfully completed the requirements and passed the examination with a score of 70% of better on the entitled course.

ASBESTOS MANAGEMENT PLANNER REFRESHER

Training was in accordance with 40 CFR Part 763 (AHERA) approved by the Commonwealth of Kentucky and Tennessee Department of Environment & Conservation The above student received requisite training for Asbestos Accreditation under Title II of the Toxic Substance Act (TSCA).

Conducted at: 1520 Alliant Ave., Louisville, KY

Expiration Date: 01-08-2025

Name – Training Manager

Name - Instructor

United States Department of Commerce
National Institute of Standards and Technology

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 200188-0

EMSL Analytical, Inc.

Indianapolis, IN

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique on ISO/IEC 17025).

2025-04-01 through 2026-03-31

Effective Dates

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

EMSL Analytical, Inc.
6340 Castleplace Dr.
Indianapolis, IN 46250
Melissa Newkirk
Phone: 317-803-2997
Email: mnewkirk@emsl.com
http://www.emsl.com

ASBESTOS FIBER ANALYSIS **NVLAP LAB CODE 200188-0**

Bulk Asbestos Analysis

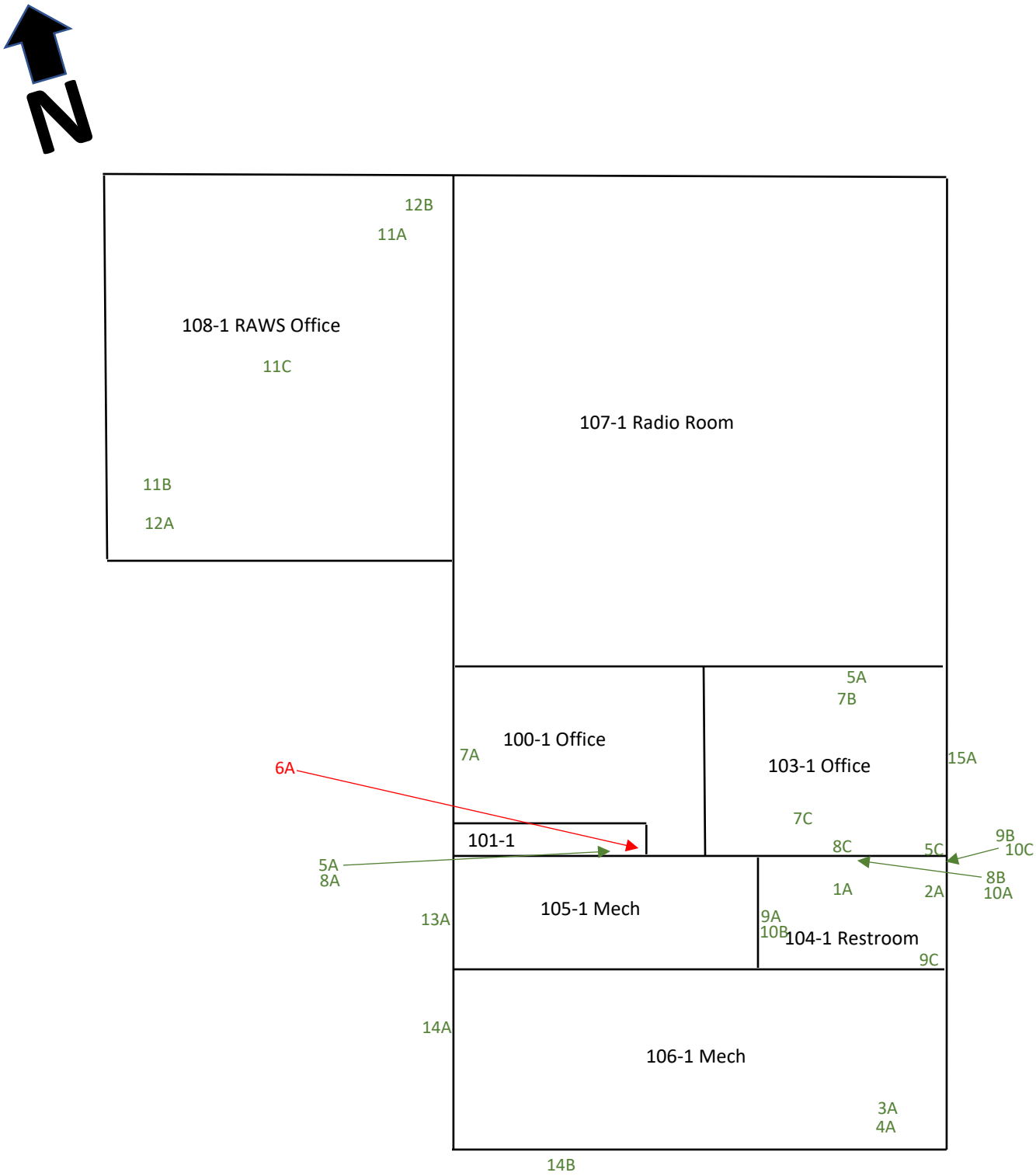
Code	***Description***
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

Code	***Description***
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program

APPENDIX D
SAMPLE LOCATION FIGURE



3A = Sample # and location – Asbestos containing
4A = Sample # and location – negative for asbestos
105-1 = Room # or Hallway
Not To Scale

US Army Corps of Engineers

US Army Corps of Engineers
Figure 1: Asbestos Sample Locations
Building 5505
Westover ARB
Chicopee, MA

APPENDIX E
SITE PHOTOS

Photo No.: 1	Date: 30 July 2025

Description:

Westover ARB: Bldg. 5505

Exterior view of Building 5505, facing northeast

Photo Direction: Facing Northwest

Photo No.: 2	Date: 30 July 2025

Description:

Westover ARB: Bldg. 5505

Green 12”x12” Vinyl Composite Tile and Black Mastic located throughout radio room and central office area

Photo Direction: Facing Northwest

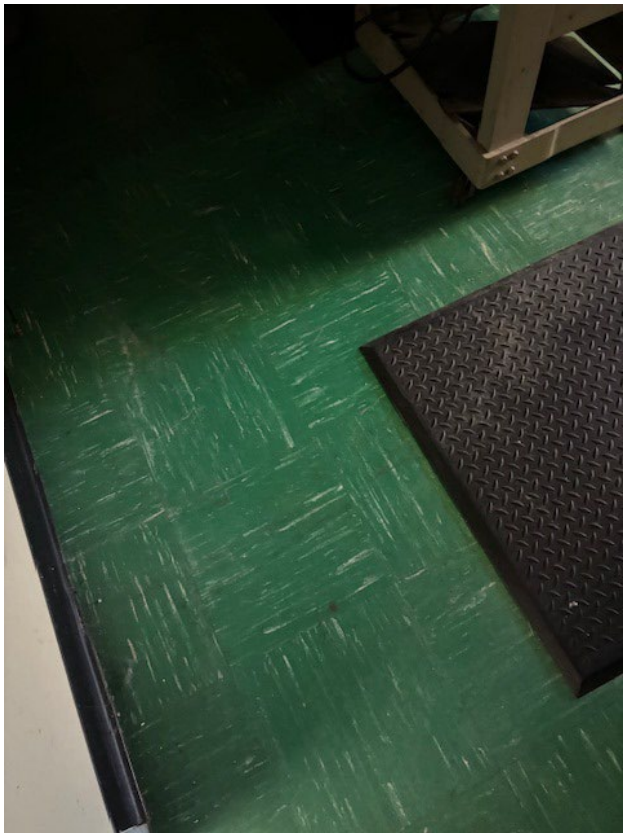


Photo No.: 3	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **2'x4' White Ceiling Tile in central office area**		
Photo Direction: Facing southwest		

Photo No.: 4	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **2'x2' White Ceiling Tile in northwest office area**		
Photo Direction: Facing West		

Photo No.: 5	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **White Flexible Vinyl Floor Tile with Black Mastic located in northwest office area**		
Photo Direction: Facing West		

Photo No.: 6	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Drywall located throughout office areas and radio room**		
Photo Direction: Facing West		

Photo No.: 7	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Wood Patterned Linoleum and Tan Vinyl Cove Base located in the Restroom**		
Photo Direction: Facing West		

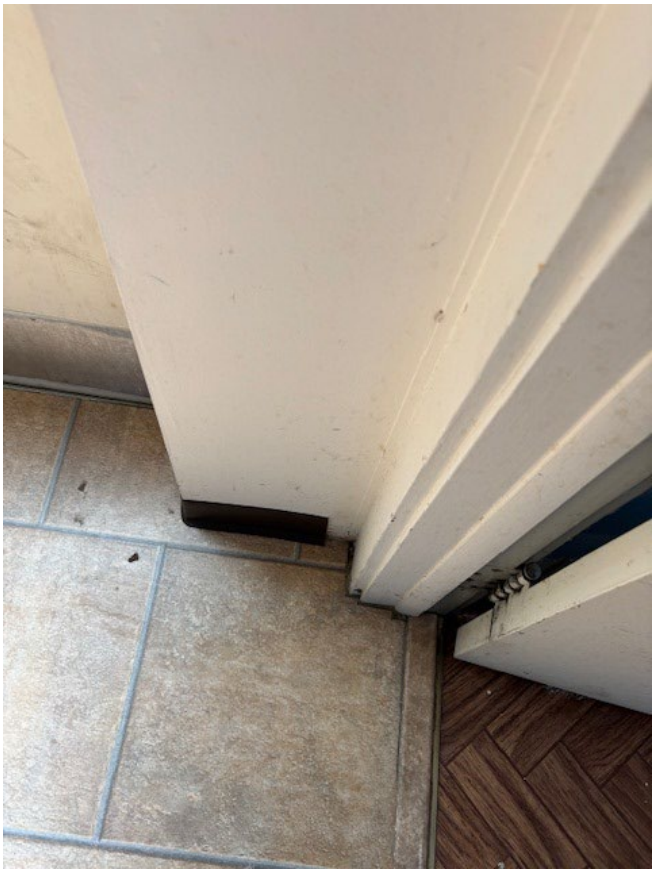
Photo No.: 8	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Brown Vinyl Cove Base observed in central office areas**		
Photo Direction: Facing Southwest		

Photo No.: 9	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Exterior White Caulk on louver hood.**		
Photo Direction: Facing North		

Photo No.: 10	Date: 30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Exterior White Window Caulk**		
Photo Direction: Facing Southeast		

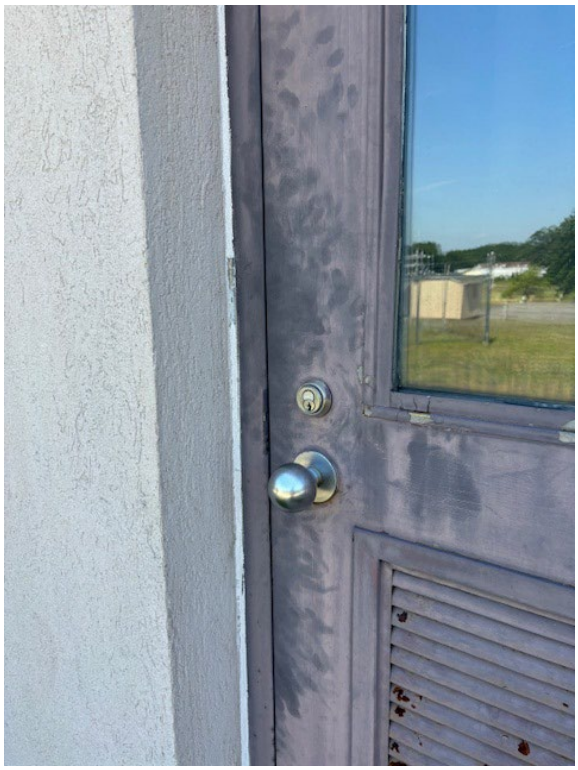
Photo No.:	Date:	
11	30 July 2025	
Description: **Westover ARB: Bldg. 5505** **Exterior White Door Caulk**		
Photo Direction: Facing West		

Photo No.:	Date:	
Description:		
Photo Direction: Facing Northwest		