HAZARDOUS BUILDING MATERIALS INSPECTION REPORT

OFFUTT AFB PROJECT: SGBP 20 -0041
Repair HVAC B 324
Offutt Air Force Base

September 4, 2020

Prepared for:

Schemmer & Associates
Omaha, NE

Prepared by:

AMI Environmental
8802 South 135th Street, Suite 400
Omaha, Nebraska 68138
AMIE # 20-205

TABLE OF CONTENTS

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Offutt Air Force Base
Bellevue, Nebraska

September 4, 2020

1. SURVEY OVERVIEW

On August 3, 2020 Building 324, located on Offutt AFB, Bellevue, Nebraska, was inspected for asbestos-containing material (ACM) and lead-based paint (LBP) by a representative of AMI Environmental (AMIE). The inspection was conducted in preparation for renovation and/or repair of the building. The renovation and/or repair project is hereinafter referred to as "The Project". The inspection was initiated at the request of Mr. Terry Wood, AIA, LEED, AP of Schemmer Associates.

The inspection was performed by Mr. William Crowe of AMIE in accordance with regulatory requirements, and generally accepted industry methods. Copies of applicable requisite training certificates for Mr. Crowe are provided in Appendix E.

1.1. Purpose and Scope

The purpose and scope of the inspection was to sample suspect ACMs and LBPs present in defined project area that may be impacted by The Project.

1.1.1. Inspection Area

The hazardous building materials inspection included all accessible interior areas and exterior of the solarium walkway of Building 324. The defined area for The Project is hereinafter referred to as the Inspection Area.

1.1.2. Limitations

At the discretion of the inspector(s), certain spaces may not have been inspected and/or samples not collected from materials that were not accessible at the time of the inspection. Examples of suspect materials that may not have been accessible include those which may exist inside finished interior walls and ceilings, and/or materials in areas not accessible due to locked doors, physical barriers, and/or safety, security, and related concerns. Materials requiring specialized equipment to access (e.g. lifts) are also considered not accessible unless prior arrangements were made. These materials, if present, should be identified at the time of renovation or demolition. Sampling of these materials may not be necessary if, in the case of suspect ACM, the materials are assumed to be ACM or if they are determined by a licensed asbestos inspector to be homogenous to other materials that were sampled.

1.2. Regulatory Reference

The asbestos inspection was conducted in accordance with USEPA National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations (ref.: 40 CFR, Part 61), following criteria established for identifying asbestos-containing building materials that may be impacted by planned repair and renovation activities; applicable protocols established by the Asbestos Hazard Emergency Response Act (AHERA) (ref.: 40 CFR 763), and the State of Nebraska Department of Health and Human Services. There is also no licensing requirement for lead paint sampling in non-HUD facilities.

2. BUILDING INFORMATION

2.1. General Construction

The area was reported to have been added to the existing dining hall.

2.2. Pre-Existing Information

No previous hazardous materials inspection and/or sampling information was available at the time of the inspection.

3. INSPECTION METHODOLOGIES

3.1. Asbestos Inspection

The asbestos inspection included visual identification and bulk sampling of suspect materials. The inspection and sampling were conducted in accordance with the USEPA National Emission Standard for Hazardous Air Pollutants (NESHAP) regulations (ref.: 40 CFR, Part 61), following criteria established for identifying asbestos-containing building materials that may be impacted by planned renovation. Additional aspects of the inspection methodology are discussed below.

3.1.1. Key Definitions

3.1.1.1. Homogenous Material

Homogenous materials are unique applications of building materials uniform in color and texture. The homogeneity of a material can be further defined by area(s) of application. Bulk sampling is conducted to determine the asbestos content of a homogenous material.

3.1.1.2. Asbestos-Containing Material (ACM)

The Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA) define ACMs as any material that contains greater than one percent asbestos, as determined by visual area estimation (microscopic analysis). The State of Kansas follows the EPA standard. Some materials contain one percent or less asbestos. While these materials are not ACMs by definition, they are still regulated by OSHA, but to a lesser degree.

3.1.1.3. Friable/Non-Friable ACM

Friable ACMs are materials that contain more than one percent asbestos and, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure, thereby releasing fibers into the air more readily. In contrast, non-friable ACMs are ACMs

that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACMs are grouped into two categories: Category I and Category II.

3.1.1.4. Regulated Asbestos-Containing Materials (RACM)

Regulated Asbestos-Containing Materials (RACM) include friable ACMs and non-friable ACMs that, depending on their category, have become friable, have been subjected to specific forms of impact damage, have a high probability of becoming friable, and/or may become friable during removal.

3.1.2. Homogenous Material Numbering Convention

All suspect asbestos materials are assigned a unique homogeneous material number (HM#). The HM# begins with two or three letters, denoting the type of material, followed by a sequential number that is assigned to every material identified within each material type (example: ABC-01). The HM# is referenced throughout the report to uniquely identify each material. AHERA identifies three basic material types: Surfacing Materials (SM), which include spray and trowel applied materials, such as fireproofing, ceiling texture, plaster, etc.; Thermal System Insulation (TSI), which includes insulating materials applied to mechanical and plumbing components for temperature preservation and condensation prevention purposes; and Miscellaneous Materials (MM), which includes all other materials, such as floor coverings and mastics, roofing materials, asbestos cement products, and many others. When a homogenous material has multiple layers, individual layers are identified with a suffix, e.g. MM-03A, MM-03B, etc. A key defining acronyms is provided on the table(s).

3.1.3. Bulk Sampling

Bulk sampling must be performed to determine whether a certain homogenous material contains asbestos. Asbestos bulk sampling for the inspection was conducted in accordance with protocols established by the Asbestos Hazard Emergency Response Act (AHERA) (ref.: 40 CFR 763). All suspect homogenous materials and associated sampling of these materials are identified in *Table 1 – Asbestos Material Sampling Table*. Suspect materials not sampled are assumed to be ACM until properly sampled and determined otherwise. Some suspect materials, such as lab table tops, roofing systems, TSI, etc., may not be sampled to preclude damage. Friability of the suspect asbestos-containing materials was determined by touching and/or sampling of the material.

3.1.3.1. Bulk Sample Numbering Convention

Bulk samples are given a sequence number when collected. When sampling information from multiple surveys are incorporated into the same report, which may result in duplicate sample numbers, the sample numbers in the *Asbestos Material Sampling Table* differentiate prior sampling events by including the year in which the previous sample was collected as a prefix to the sample number. For example, a sample number of 1993-46A denotes sample no. 46A from a 1993 survey. This report contains no sampling information from previous surveys.

3.1.3.2. Polarized Light Microscopy Analysis (PLM)

Bulk samples collected during the inspection were submitted to an EPA accredited laboratory, EMSL Analytical, Inc. (EMSL), located at 200 Route 130 North, Cinnaminson, New Jersey. EMSL was instructed to perform Polarized Light

Microscopy (PLM) analysis, utilizing dispersion staining techniques (ref: EPA Method 600/M4-82-020). PLM analysis is the least expensive and most commonly used visual estimate method. While PLM analysis is acceptable to EPA, OSHA, and most states for determining asbestos content, some states now require more sophisticated methods when analyzing certain types of materials.

A total of nineteen (19) asbestos bulk samples were collected and submitted for laboratory analysis from homogenous materials identified during the asbestos inspection. PLM analysis was performed on a total of twenty-one (21) heterogeneous applications identified in the homogenous materials. Heterogeneous applications are individual layers of different materials contained within a single bulk sample, each of which must be analyzed individually to determine its asbestos content (e.g. vinyl floor tiles and mastic; cove base and mastic; etc.).

Some samples and/or heterogeneous applications may not have been analyzed by the lab if a positive result was obtained from a sample that is among a group of samples representing a suspect material. This process, known as "stop on first positive," is followed because if a single sample is found to be positive, that material is determined to be ACM, thus making it unnecessary to analyze any additional samples in the sampling group.

Please refer to the *Table 1 – Asbestos Material Sampling Table* in Appendix A for a complete listing of all materials sampled. The laboratory analytical reports may be found in Appendix C.

3.1.3.3. Quantification Method Analysis

EPA regulations allow materials determined to contain less than 10 percent asbestos utilizing a visual estimate quantification method, such as PLM analysis, to be treated as non-asbestos containing if the material is re-analyzed using one of two quantification methods and determined to contain one percent or less of asbestos. The two acceptable quantification methods are point count analysis and TEM Chatfield analysis.

Quantification methods are more time-consuming and more expensive analytical procedures that are occasionally used to more accurately determine the amount of asbestos in certain samples. Because of their higher cost and the acceptable accuracy of the less expensive visual estimation method, laboratories do not typically perform quantification analyses unless specifically requested.

The quantification method known as point count analysis is used for most ACM types, except floor tile. The organic matrix composition of floor tile precludes the use of point count analysis to more accurately determine asbestos amounts within a sample. Therefore, TEM Chatfield analysis—which effectively removes all organic materials, leaving only asbestos behind—is necessary to provide a more precise percentage of asbestos content in floor tile.

Please refer to section *6.0 Recommendations*, for recommendations concerning supplemental analysis.

3.2. Lead-Based Paint Inspection

The LBP inspection included visual identification of homogenous paint applications and bulk (chip) sampling of the paint(s). While the U. S. Department of Housing and Urban Development (HUD) promulgates guidelines for LBP inspections in child occupied facilities, there are no formal guidelines

for non-HUD regulated inspections. Thus, the LBP inspection was conducted in accordance with generally accepted industry standards and practices. Additional aspects of the inspection methodology are discussed below.

3.2.1. Key Definitions

3.2.1.1. Homogenous Paint Applications

Homogenous paint applications are significant paint applications that are visually distinct by their color and uniformity. Significant paint applications do not include incidental occurrences of paint such as isolated occurrences of accent trim, artistic paints, etc. While visual inspection alone cannot generally identify sub-layers of paint, these applications are often identified during the chip sampling process.

3.2.1.2. Lead-Based Paint (LBP)

Pursuant to Federal Register, Vol. 61, No. 169, LBP is defined as paint or other surface coatings containing more than 0.5 percent lead by weight.

3.2.2. Homogenous Paint Applications Numbering Convention

Homogenous paints and coatings are assigned a unique homogeneous material number (HM#). For paints, the HM# begins with "LP", followed by a sequential number that is assigned to every paint identified (e.g. LP-01). The HM# is referenced throughout the report to uniquely identify each paint application.

3.2.3. Lead-based Paint and Lead-containing Material Sampling

A total of five (5) homogeneous painted materials were collected from significant and visually distinct paint applications identified during the lead paint inspection. Additionally, one (1) ceramic tile flooring was sampled as suspect lead-containing material. The samples were submitted to EMSL for laboratory analysis, utilizing Flame Atomic Absorption Spectrophotometry (SW 846 3050B/7000B). EMSL's NLLAP (National Lead Laboratory Accreditation Program) and AIHA ELLAP (Environmental Lead Laboratory Accreditation Program) accreditation number is 100194.

Please refer to *Table 2 – Lead Paint Sampling Table* in Appendix A for a complete listing of the paint applications identified and sampled for lead. The laboratory's analytical reports are provided in Appendix C.

4. SUMMARY OF INSPECTION FINDINGS

Key findings of the hazardous building materials inspection are summarized below. Please refer to the Appendices for complete details of the inspection findings and supporting documentation.

4.1. Asbestos Inspection Findings

• Black Exterior Caulk	3% Chrysotile	5000 LF
• Gray Exterior Vertical Seam Caulk	5% Chrysotile	500 LF
• Fire Doors	Assumed ACM	8 EA

4.2. Lead-Based Paint Inspection Findings

- No lead-based paint was identified in the Project Area.
- Ceramic Tile was not lead-containing.

- Paint applications were determined to contain detectable levels of lead. See Section 7.2 for more information on Lead in Construction.

See Appendix D, Schematics, for locations of Asbestos Containing Materials.

5. RISKS AND HAZARDS

5.1. Asbestos

To be a significant health concern, asbestos fibers must be inhaled. When asbestos fibers are inhaled, they become lodged in the lung tissue or alveoli. Here they clog and scar the tissues, causing the walls of the alveoli to lose their elasticity and useful function in respiration. Asbestosis (scarring of the lung), lung cancer, and Mesothelioma (cancer of the lining of the chest or lining of the abdominal wall) are diseases associated with asbestos exposure. Risks and hazards increase with increased exposure. ACM condition, proximity to building occupants, building use, and other factors can influence the potential for asbestos fibers to become airborne, and therefore increase exposure risks.

5.2. Lead-Based Paint

Inhalation and ingestion are the major routes of lead exposure. Once in the body, lead is distributed via the bloodstream to red blood cells, soft-tissue and bone. The kidneys and gastrointestinal (GI) tract eliminate lead in the body very slowly, while minute amounts are lost through perspiration.

Lead in the body can cause serious damage to the central and peripheral nervous system, the cardiovascular system, and the kidneys. Exposure to high concentrations of lead can cause retardation, convulsions, coma, and sometimes death. Children are especially vulnerable and susceptible to lead poisoning. Even low levels of exposure persisting during childhood are known to slow a child's normal development and cause learning and behavioral problems. Exposure to lead can result from deteriorating surfaces and activities mechanically impacting lead surfaces. Preventing exposure requires proper work practices, monitoring, disposal and personal protective equipment during demolition, alteration and friction producing activities.

6. RECOMMENDATIONS

The purpose of this section is to interpret survey findings and provide preliminary recommendations that may be relevant and appropriate at this time. Because this document is a presentation of investigative findings, recommendations related to future construction activities are inherently general in nature. More specific determinations concerning hazardous building materials to be impacted by construction should be made during the abatement project design process.

6.1. General Recommendations

6.1.1. Asbestos

State and/or federal regulations require that ACMs be removed prior to demolition or renovation activities that will impact the ACMs. Depending on the specific renovation work to be performed, certain ACMs, such as the lab sink and countertop, may not require removal if they will not be disturbed and do not pose a risk to building occupants or construction trade workers. However, to ensure worker safety and to eliminate future asbestos-related maintenance and management costs and risks, AMIE recommends removal of all identified ACMs in the areas to be renovated.

6.1.2. Lead-Based Paint

Facility owners are ultimately liable for their lead-containing hazardous waste from cradle to grave. EPA regulations provide two ways to determine whether a waste stream, such as demolition debris containing LBP, must be classified as hazardous waste. Waste generators can either test the waste using an approved testing method (Toxicity Characteristic Leaching Procedure [TCLP]), or they can apply knowledge of the hazardous characteristic of the waste.

AMIE recommends TCLP testing be conducted on the existing building materials, painted and unpainted, prior to the start of renovation or demolition activity to document that the waste stream is acceptable for disposal of as non-hazardous waste. In addition, trade contractors who work in the facility should be notified of the presence of paints containing lead so that they can appropriately monitor and protect their workers against lead exposure.

6.2. Hazardous Conditions Recommendations

Potentially hazardous conditions were observed in the building and are described below. The conditions described are not intended to be a complete assessment of potential hazards. Additional hazards may be present.

- No immediately hazardous conditions were observed.

6.3. Point Count Analysis / TEM Chatfield Analysis Recommendations

No additional laboratory analysis is recommended.

7. Regulatory Requirements

7.1. Asbestos-Containing Materials

The removal and disposal of ACMs is regulated at the federal, state, and, sometimes, local level. While some states have developed their own regulatory standards for the various asbestos disciplines, many states have adopted the federal standards but have established licensing requirements and enforcement authority at the state level.

7.1.1. Notification Requirements

EPA's NESHAP regulation, 40 CFR, Subpart M, 61.145, Standard for Demolition and Renovation, stipulates that an owner of a facility submit proper notification with either the EPA's regional office and/or the state and local regulatory agency of intention to demolish or renovate. Notifications must be received by the appropriate regulatory agencies 10 working days prior to commencement of asbestos stripping or removal, or other site work. If the demolition or renovation date changes, or the scope of work is increased by more than 20 percent, another notification must be made.

7.1.2. Asbestos Removal Requirements

Asbestos removal must be performed by a licensed abatement contractor. The contractor should follow all work practices, worker protection, and disposal requirements set forth in the contract specifications and by the Occupational Safety and Health Administration (OSHA) and the EPA. Key federal regulations concerning asbestos include 29 CFR 1910.1001, 29 CFR 1926.1101, 40 CFR Part 61, Subpart M, and 40 CFR 763.

7.1.3. OSHA Regulation of <1 Percent Asbestos

While EPA and many states do not regulate materials containing less than one percent asbestos, OSHA regulates materials containing any amount of asbestos. (Ref. OSHA Construction Industry Standard, 29 CFR 1926.1101(a)(3))

7.1.4. State of Nebraska Asbestos Removal Regulations

State of Nebraska regulates the removal of friable asbestos-containing materials and non-friable asbestos containing materials that may become friable during removal, when affected quantities are greater than three square or three linear feet. For a complete understanding of the Nebraska governing asbestos projects, refer to Title 178, Chapter 22.

7.2. Lead-Based Paint

7.2.1. Disposal Requirements

The Resource Conservation and Recovery Act (RCRA) classifies lead-containing waste streams as hazardous materials if TCLP levels exceed five parts per million. If TCLP leachable lead levels exceed that threshold, EPA regulations (40 CFR 261) require the waste stream to be handled and disposed of as a hazardous waste. Waste streams containing less the five parts per million of leachable lead are classified as non-hazardous waste and can be disposed of in a construction and demolition landfill.

7.2.2. Construction Requirements

OSHA's 29 CFR 1926.62 regulates worker exposure to lead during construction activities that include demolition or salvage of structures where lead or materials containing lead are present, as well as removal or encapsulation of lead-containing materials. The standard establishes maximum limits of exposure to lead, including a permissible exposure limit and action level, and should be adhered to during construction and demolition activities.

APPENDIX A

Table 1 – Asbestos Sampling

Table 2 – Lead-based Paint Sampling

Table 1 – Asbestos Material Sampling Table

Table 1. Asbestos Material Sampling Results

Asbestos Containing Materials (ACM) = >1% Asbestos

Homogeneous Area	Sample No.	Photo No.	Description	Color	Material Location	Asbestos Content	Estimated Quantity	Comments
1	1	1	2' x 2' Ceiling Tile	White	B 324 Dining Hall Atrium	None Detected		
1	2	1	2' x 2' Ceiling Tile	White	B 324 Dining Hall Atrium	None Detected		
1	3	1	2' x 2' Ceiling Tile	White	B 324 Dining Hall Atrium	None Detected		
2	4	2	Drywall	White	B 324 Dining Hall Atrium	None Detected		
3	4A	2	Joint Compound	White	B 324 Dining Hall Atrium	None Detected		
2	5	2	Drywall	White	B 324 Dining Hall Atrium	None Detected		
3	5A	2	Joint Compound	White	B 324 Dining Hall Atrium	None Detected		
4	6	3	Interior of External Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
4	7	3	Interior External Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
5	8	4	Interior Exterior Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
5	9	4	Interior External Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
6	10	5	Atrium side of Dining Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
6	11	5	Atrium side of Dining Window Caulk	Black	B 324 Dining Hall Atrium	None Detected		
7	12	6	Exterior Window Caulk	Black	B 324 Dining Hall Atrium	3% Chrysotile	3000 LF	
7	13	6	Exterior Window Caulk	Black	B 324 Dining Hall Atrium	3% Chrysotile	Included in above	
8	14	7	External Vertical Seam Caulk	Gray	B 324 Dining Hall Atrium	5% Chrysotile	100 LF	
8	15	7	External Vertical Seam Caulk	Gray	B 324 Dining Hall Atrium	5% Chrysotile	Included in above	
9	16	8	Exterior Base Caulk	Gray	B 324 Dining Hall Atrium	None Detected		
9	17	8	Exterior Base Caulk	Gray	B 324 Dining Hall Atrium	None Detected		
10	18	9	Exterior Base Caulk	Black	B 324 Dining Hall Atrium	None Detected		
10	19	9	Exterior Base Caulk	Black	B 324 Dining Hall Atrium	None Detected		
11		10	Fire Doors	Brown	B 324 Dining Hall Atrium	Assumed ACM	8 EA	

Table 2 – Lead Sampling Table

Table 2. Lead-Based Paint/Lead Material Sampling Results

Lead-Based Paint = ≥ 0.5% Lead (by weight)

Sample No.	Photo No.	Substrate	Description	Location	Color	Lead Content % by weight	Condition	Estimated Quantity
1	1	Drywall	Painted Walls	B 324 Dining Hall Solarium	Tan	<0.0080	Fair	
2	2	Wood	Painted Benches	B 324 Dining Hall Solarium	Brown	<0.0080	Poor	
3	3	Wood	Painted Shelves	B 324 Dining Hall Solarium	Brown	<0.0080	Fair	
4	4	Metal	HVAC Wall Units	B 324 Dining Hall Solarium	Brown	0.32	Fair	
5	5	Metal	Doors	B 324 Dining Hall Solarium	Brown	<0.0048	Fair	
6	6	N/A	Ceramic Tile Floor	B 324 Dining Hall Solarium	Tan	<0.0040	Fair	

APPENDIX B

Photo Logs

Asbestos Photo Log

Lead-Based Paint Photo Log

www.amienvironmental.com

8802 South 135th Street, Suite 100 • Omaha, NE 68138

800.828.8487 • 402.397.5001 • 402.397.3313 (fax)

Asbestos Photo Log

PHOTO 1	2' x 2' Ceiling Tile Entry Non-ACM

PHOTO 2	Drywall Joint Compound Atrium Non-ACM

PHOTO 3	Black Caulk Atrium Non-ACM

PHOTO 4	Black Caulk Atrium Non-ACM

PHOTO 5	Black Caulk Interior Windows Atrium Non-ACM

PHOTO 6	Black Caulk Exterior Windows 3% Chrysotile

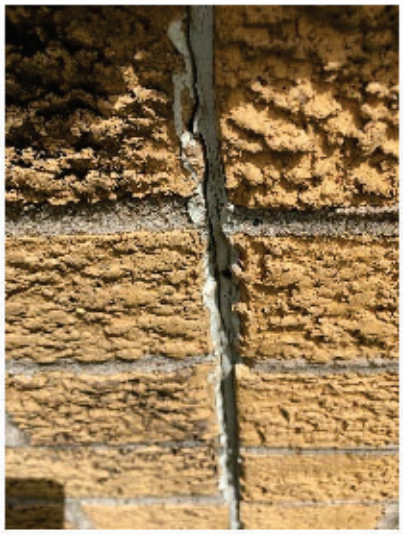

PHOTO 7	Gray Exterior Vertical Seam Caulk 5% Chrysotile

PHOTO 8	Gray Base Exterior Caulk Non-ACM

PHOTO 9	Black Exterior Base Caulk Non-ACM

PHOTO 10	Fire Door Assumed ACM

Lead-Based Paint Photo Log

PHOTO 1	Tan Painted Walls < 0.5% lead (by weight)

PHOTO 2	Brown Painted Bench < 0.5% lead (by weight)

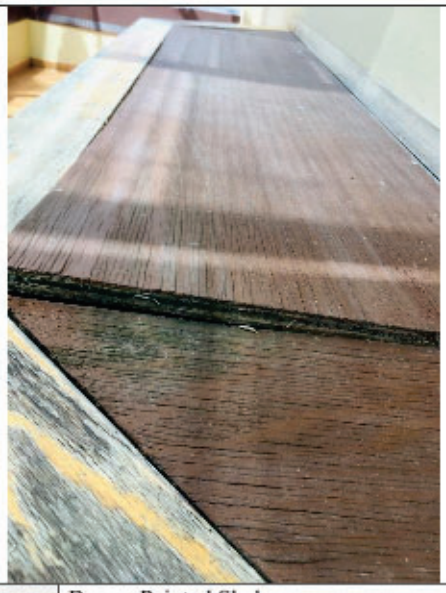

PHOTO 3	Brown Painted Shelves < 0.5% lead (by weight)

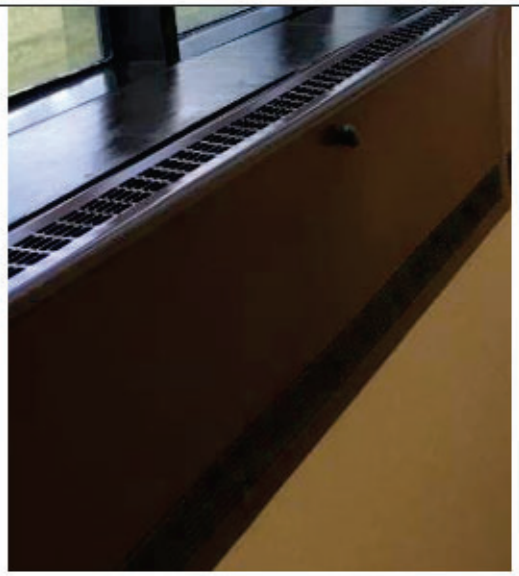

PHOTO 4	Brown Painted HVAC Units < 0.5% lead (by weight)

PHOTO 5	Brown Painted Door < 0.5% lead (by weight)

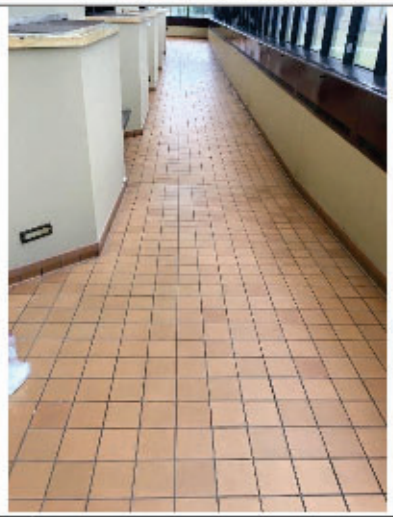

PHOTO 6	Tan Ceramic Tile Floor < 0.5% lead (by weight)

APPENDIX C

Laboratory Results

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042018819
Customer ID:	AMI50
Customer PO:	20-205
Project ID:	

Attention:	Bill Crowe	**Phone:**	(402) 981-1006
	AMI Group, Inc.	**Fax:**	(402) 397-3313
	8802 South 135th Street	**Received Date:**	08/05/2020 10:00 AM
	Suite 100	**Analysis Date:**	08/07/2020
	Omaha, NE 68138-6511	**Collected Date:**	08/03/2020
Project:	20-205 / Dining Hall B324 Offutt AFB		

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BC1 *042018819-0001*	Ceiling Tile 2'x2'	White Fibrous Homogeneous	60% Min. Wool	40% Non-fibrous (Other)	None Detected
BC2 *042018819-0002*	Ceiling Tile 2'x2'	White Fibrous Homogeneous	60% Min. Wool	40% Non-fibrous (Other)	None Detected
BC3 *042018819-0003*	Ceiling Tile 2'x2'	White Fibrous Homogeneous	60% Min. Wool	40% Non-fibrous (Other)	None Detected
BC4-Drywall *042018819-0004*	Drywall	Brown/White Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (Other)	None Detected
BC4-Joint Compound *042018819-0004A*	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC5-Drywall *042018819-0005*	Drywall	Brown/White Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (Other)	None Detected
BC5-Joint Compound *042018819-0005A*	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC6 *042018819-0006*	Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC7 *042018819-0007*	Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC8 *042018819-0008*	Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC9 *042018819-0009*	Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC10 *042018819-0010*	Interior - Black	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC11 *042018819-0011*	Interior - Black	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC12 *042018819-0012*	Black Exterior	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
BC13 *042018819-0013*	Black Exterior	Black Non-Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
BC14 *042018819-0014*	Gray Caulk - Exterior	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile

Initial report from: 08/08/2020 00:11:29

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Tel/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order:	042018819
Customer ID:	AMI50
Customer PO:	20-205
Project ID:	

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
BC15 *042018819-0015*	Gray Caulk - Exterior	Gray Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
BC16 *042018819-0016*	Gray Caulk - Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC17 *042018819-0017*	Gray Caulk - Base	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
BC18 *042018819-0018*	Black Base Cove	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
BC19 *042018819-0019*	Black Base Cove	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

Analyst(s)
Keishla Vazquez Caraballo (11)
Nancy Stalter (10)

Samantha Rundstrom, Laboratory Manager
or Other Approved Signatory

Initial report from: 08/08/2020 00:11:29

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	202006971
CustomerID:	AMI50
CustomerPO:	20-205
ProjectID:	

Attn: **Bill Crowe**
AMI Group, Inc.
8802 South 135th Street
Suite 100
Omaha, NE 68138-6511

Phone:	(402) 397-5001
Fax:	(402) 397-3313
Received:	08/05/20 11:00 AM
Collected:	8/3/2020

Project: **20-205 / B324 Offutt AFB**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*Weight*	*RDL*	*Lead Concentration*
L2	8/3/2020	8/6/2020	0.2535 g	0.0080 % wt	<0.0080 % wt
202006971-0002	Site: Tan Painted Wall (On Drywall)				
L3	8/3/2020	8/6/2020	0.2998 g	0.0080 % wt	<0.0080 % wt
202006971-0003	Site: Brown Painted Benches (Wood)				
L4	8/3/2020	8/6/2020	0.2764 g	0.0080 % wt	<0.0080 % wt
202006971-0004	Site: Brown Shelved (Wood)				
L5	8/3/2020	8/6/2020	0.0403 g	0.050 % wt	0.32 % wt
202006971-0005	Site: Brown HVAC (Metal)				
L7	8/3/2020	8/6/2020	0.0419 g	0.048 % wt	<0.048 % wt
202006971-0007	Site: Brown Doors				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

Initial report from 08/08/2020 15:05:57

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	202006971
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Omaha, NE 68138-6511

Phone:	(402) 397-5001
Fax:	(402) 397-3313
Received:	08/05/20 11:00 AM
Collected:	8/3/2020

Project: **20-205 / B324 Offutt AFB**

Test Report: Lead by Flame AAS (SW 846 3050B/7000B)*

Client SampleDescription	*Collected*	*Analyzed*	*Weight (g)*	*RDL*	*Lead Concentration*
L1	8/3/2020	8/6/2020	0.5206 g	40 mg/Kg	<40 mg/Kg
202006971-0001	Site: Brown Ceramic Tile				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

Initial report from 08/08/2020 15:05:57

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EMSL Order:	202006971
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CustomerPO:	20-205
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Received:	08/05/20 11:00 AM
Collected:	8/3/2020

Project: **20-205 / B324 Offutt AFB**

Test Report: Lead by Flame AAS (SW 846 3050B/7000B)*

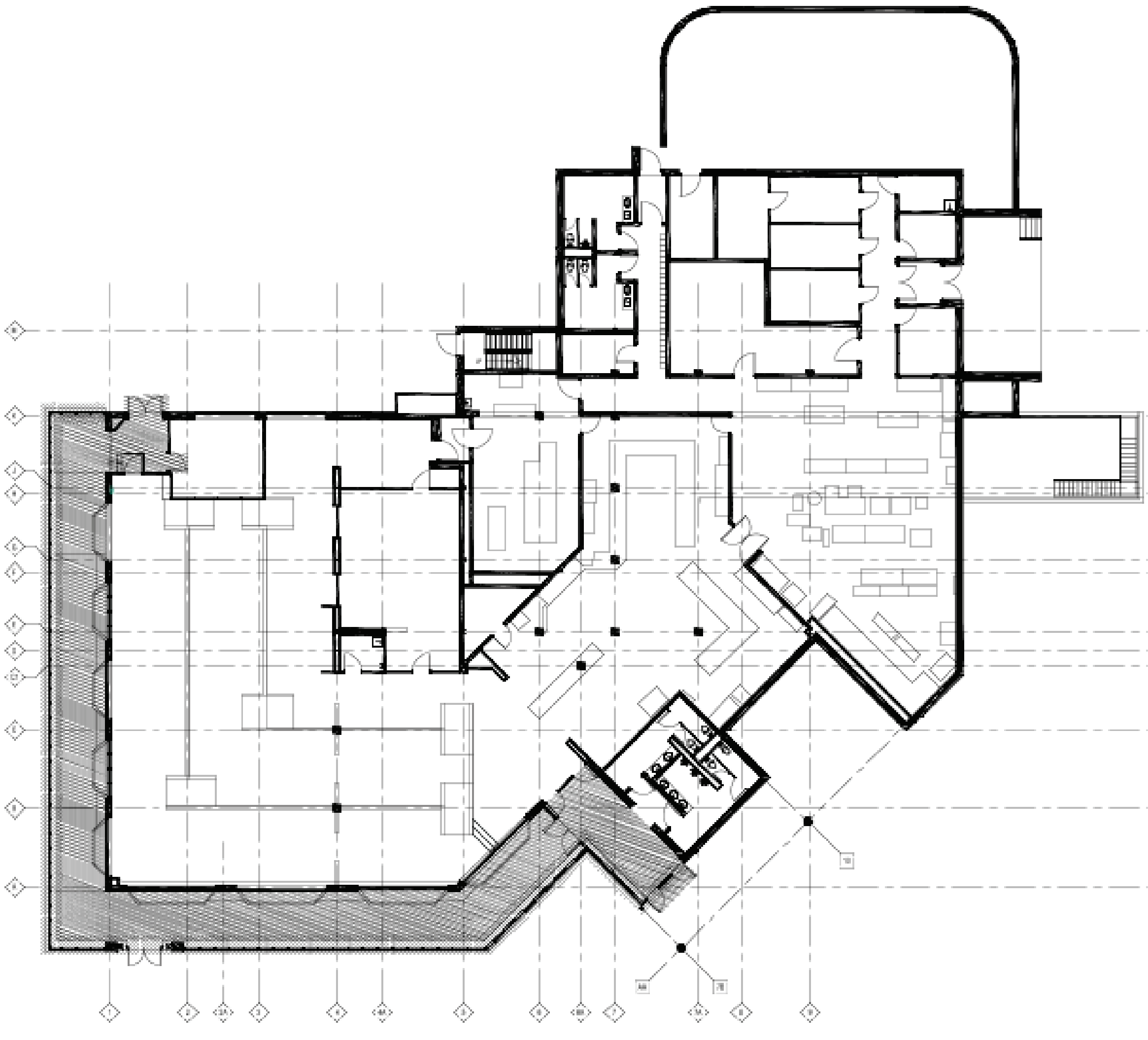
Client SampleDescription	*Collected*	*Analyzed*	*Weight*	*RDL*	*Lead Concentration*
L1	8/3/2020	8/6/2020	0.5206 g	0.0040 % wt	<0.0040 % wt
202006971-0001	Site: Brown Ceramic Tile				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

Report Amended: 08/19/2020 11:28:05 Replaces the Inital Report 08/08/2020 15:06:04. Reason Code: Results Changed to % weight

APPENDIX D

Schematics



1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES

1. THE PROJECT AREA WAS RECENTLY SURVEYED FOR ACM. REFER TO THE HAZARDOUS BUILDING MATERIALS INSPECTION REPORT OF HW ENVIRONMENTAL, DATED SEPTEMBER 4, 2020 FOR MORE INFORMATION ABOUT ACMS IDENTIFIED IN THE PROJECT AREA.

2. THESE DRAWINGS ARE DIAGRAMMATIC AND FOR GENERAL IDENTIFICATION OF ASBESTOS-CONTAINING MATERIALS (ACM) AND LEAD-BASED PAINT (LBP) SUBJECT TO REMOVAL OR DISTURBANCE. THEIR ACCURACY IS NOT GUARANTEED. LOCATIONS AND QUANTITIES SHOWN OF ACM TO BE REMOVED ARE REPRESENTATIVE BASED ON RECENT AND PREEXISTING SITE SURVEY INFORMATION. THE ABATEMENT CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL MATERIAL LOCATIONS AND REMOVAL QUANTITIES, AND EXISTING SITE CONDITIONS.

3. ASBESTOS REMOVAL IS BEING PERFORMED PURSUANT TO RENOVATION OF THE PROJECT AREAS. REMOVE AND DISPOSE OF ALL ACM IN ACCORDANCE WITH APPLICABLE REGULATIONS, PROJECT SPECIFICATIONS, AND THE APPROVED ASBESTOS HAZARD ABATEMENT PLAN (AHAP). IF SUSPECT ACMS ARE ENCOUNTERED DURING CONSTRUCTION AND DEMOLITION THAT ARE NOT IDENTIFIED ON THE ASBESTOS ABATEMENT DRAWINGS, STOP WORK AND CONTACT THE PROJECT MANAGER.

4. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS, PROJECT SPECIFICATIONS, THE APPROVED WORK PLAN, AND ACCEPTED INDUSTRY PRACTICE. WHEN REQUIREMENTS OVERLAP OR CONFLICT, THE MOST STRINGENT REQUIREMENT SHALL APPLY. ALL WORK SHALL BE SUBJECT TO INSPECTION BY THE OWNER, THE OWNER'S CONSULTANTS, AND REGULATORY PERSONNEL.

ASBESTOS NOTES

1. CONCEALED ACM PIPE INSULATION (TSI) MAY EXIST WITHIN WALLS, ABOVE CEILINGS, PIPE CHASES AND ABOVE RIGID CEILINGS. COORDINATE ACCESS WITH DEMOLITION DRAWINGS AND THE GENERAL CONTRACTOR. SOME EXPLORATORY DEMOLITION MAY BE REQUIRED TO DETERMINE IF CONCEALED ACM IS PRESENT.

2. IF CONCEALED THERMAL SYSTEM INSULATION IS FOUND DURING CONSTRUCTION, ESTABLISH REGULATED AREA AND REMOVE THERMAL SYSTEM INSULATION (TSI) COVERED PIPE AND FITTINGS USING GLOVEBAG ABATEMENT METHODS AS REQUIRED FOR SECTIONS OF PIPE TO BE DEMOLISHED. WRAP AND CUT METHODS MAY BE USED ONLY IF APPROVED BY THE GENERAL CONTRACTOR. USE GLOVEBAG ABATEMENT METHODS TO REMOVE ACM THAT REMAINS IN WALL PENETRATIONS. WHEN GLOVEBAG METHODS ARE NOT FEASIBLE, USE FULL CONTAINMENT AND ISOLATION PROCEDURES (MAJOR DECONTAMINATION AREAS) IN ACCORDANCE WITH ASBESTOS SPECIFICATION UFGS 02 82 00.

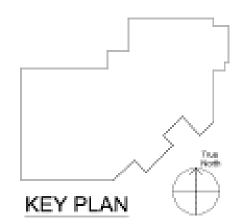
3. FIRE DOORS WITHIN THE PROJECT LIMITS ARE ASSUMED ACM. TESTING SHOULD BE DONE AT CONSTRUCTION PHASE OR ASSUME ACM.

4. COORDINATE NEGATIVE AIR DISCHARGE LOCATIONS WITH GENERAL CONTRACTOR, IF NEEDED.

5. THE ABATEMENT CONTRACTOR SHALL WORK CLOSELY WITH THE GENERAL CONTRACTOR TO COORDINATE REMOVAL OF ACM IN ACCORDANCE WITH PROJECT SCHEDULING, SEQUENCING, AND PHASING REQUIREMENTS. SOME AFTER HOURS AND WEEKEND WORK MAY BE REQUIRED. PHASING IS SUBJECT TO CHANGE TO ACCOMMODATE SITE CONDITIONS AND FACILITY OPERATIONS.

SUMMARY OF ASBESTOS CONTAINING MATERIALS

DESCRIPTION	FRIABLE	EST. QTY.	LEGEND
BLACK CAULK ON WINDOWS (EXTERIOR)	NO	APPROX. 5800 LF (240 WINDOWS)	
GRAY CAULK ON VERTICAL SEAMS (INTERIOR)	NO	500 LF	
FIRE DOORS	NO	8 EACH	



KEY PLAN

35% DESIGN SUBMITTAL

Offutt
Air Force Base

APPROVED

SIGNATURE	OFFICE

COORDINATION

"SIGNING IN THE COORD SHEET CONSTITUTES COORDINATION OF ALL DRAWINGS IN THIS PROJECT. SUBSEQUENT SHEETS NEED NOT BE SIGNED."

DESIGN FIRM:

Designer W.H.C.	Project Manager Checker
Drawn W.H.C.	Date 09/04/2020

REVISION	BY/DATE

SHEET TITLE
ASBESTOS CONTAINING MATERIAL LOCATIONS
HA101

SHEET OF

PROJECT TITLE
REPAIR HVAC B324

Project Number
SGBP 20-0041

Off-B-6449 | B324

A0.00 | Breaker

APPENDIX E

Inspector Credentials