# HAZARDOUS BUILDING MATERIALS INSPECTION REPORT

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

**November 22, 2022**

*Prepared for:*

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Omaha, NE

Prepared by:

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AMIE # 22-275

# State of Nebraska

Department of Health and Human Services
Division of Public Health

William H Crowe

Asbestos Inspector

**License #:** 1368 **Expiration:** 01/31/2021

**Status:** Active

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# HAZARDOUS MATERIALS INSPECTION REPORT

**OFFUTT AFB PROJECT: SGBP 20-0041**
**Repair HVAC B 324 – Redesign**
**Offutt Air Force Base**
**Bellevue, Nebraska**

**November 22, 2022**

## 1. SURVEY OVERVIEW

On October 31, 2022 Building 324, located on Offutt AFB, Bellevue, Nebraska, was inspected for asbestos-containing material (ACM) and lead-based paint (LBP) by representatives 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. Tom Svoboda, PE, CEM of Schemmer Associates.

The inspection was performed by Mr. Colin Lauenroth and Dustin Wessel of AMIE in accordance with regulatory requirements, and generally accepted industry methods. Copies of applicable requisite training certificates for Mr. Lauenroth and Mr. Wessel 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 steam piping in B324 that will be impacted by the planned demolition/renovation activities including the basement mechanical room, 1st floor kitchen area, and the upper level mechanical space. 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

Due to planned renovations, the steam piping in the building will no longer be required, and will be removed from the building.

### 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 in the inspection area.

#### 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 6340 CastlePlace Dr.

Indianapolis, IN 46250. 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 thirty-one (31) 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 forty-four (44) 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 "L", followed by a sequential number that is assigned to every paint identified (e.g. L-1). 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 two (2) 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 157245.

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

| | | |
|---|---|---|
| • Mudded Fittings (Gray/White) | 4% Chrysotile | 3 EA |
| • Mudded Fittings (White) | 10% Chrysotile/5% Amosite | 12 EA |
| • Mudded Fittings (Brown/White) | 2% Chrysotile | 6 EA |
| • Mudded Fittings (Gray) | 5% Chrysotile | 30 EA |
| • Tank Insulation (Gray) | 15% Chrysotile | 225 SF |

### 4.2. Lead-Based Paint Inspection Findings

- Concrete Pad Edge Paint 2.7% Lead by Weight 70 SF
- 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 and Lead-Based Paint.

## 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, 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

| Material #/ Description | Sample ID | Layer ID | Color | Location | Sample Result | Condition | Friable (Y/N) | Estimated Quantity | Photo No. |
|---|---|---|---|---|---|---|---|---|---|
| TSI-01: Fiberglass Pipe Wrap w/ Mastic (White) 2" Pipe | 01<br>02<br>03 | 01<br>02<br>03<br>– Wrap | White/ Silver | Kitchen pipes and Attic (HPS, LPS, Condensate) | Non-Detect | | | | 1 |
| TSI-01A: Fiberglass Pipe Wrap w/ Mastic (White) 2" Pipe | 01<br>02<br>03 | 01<br>02<br>03<br>– Mastic | White | Kitchen pipes and Attic (HPS, LPS, Condensate) | Non-Detect | | | | 1 |
| TSI-02: Fiberglass Pipe Wrap w/ Mastic (White) 4" Pipe | 04<br>05<br>06 | 04<br>05<br>06<br>-Wrap | White/ Silver | Kitchen pipes and Attic pipes | Non-Detect | | | | 2 |
| TSI-02A: Fiberglass Pipe Wrap w/ Mastic (White) 4" Pipe | 04<br>05<br>06 | 04<br>05<br>06<br>-Mastic | Yellow/ White | Kitchen pipes and Attic pipes | Non-Detect | | | | 2 |
| **TSI-03: Large Mudded Fitting (Gray/White) 2' Fitting** | **07<br>08<br>09** | **07<br>08<br>09<br>-Mudded Fitting** | **Gray** | **Basement Southeast Corner** | **4% Chrysotile** | **Good** | **Y** | **3 EA** | **3** |
| TSI-03A: Large Mudded Fitting (Gray/White) 2' Fitting | 07<br>08<br>09 | 07<br>08<br>09<br>-Wrap | Tan/ White | Basement Southeast Corner | Non-Detect | | | | 3 |
| **TSI-04: 4" Mudded Fittings (White)** | **10<br>11<br>12** | **10<br>11<br>10<br>-Mudded Fitting** | **White** | **Basement South Side** | **5% Amosite<br>10% Chrysotile** | **Fair** | **Y** | **12 EA** | **4** |
| TSI-04A: 4" Mudded Fittings (White) | 10<br>11<br>12 | 10<br>11<br>10<br>-Wrap | White/ Tan | Basement South Side | Non-Detect | | | | 4 |
| **TSI-05: 4" Mudded Fittings (Brown/White)** | **13<br>14<br>15** | **13<br>14<br>15<br>-Mudded Fitting** | **Gray** | **Basement, South side above other pipes** | **2% Chrysotile** | **Fair** | **Y** | **6 EA** | **5** |

*Table 1: Asbestos-Containing Material Sampling Table & Test Results*
*AMI Project No.: 22-275*
*Offutt AFB Dining Hall B-324*
*November 22, 2022*

AMI ENVIRONMENTAL

# Table 1

| Material #/ Description | Sample ID | Layer ID | Color | Location | Sample Result | Condition | Friable (Y/N) | Estimated Quantity | Photo No. |
|---|---|---|---|---|---|---|---|---|---|
| TSI-05A: 4" Mudded Fittings (Brown/White) | 13<br>14<br>15 | 13<br>14<br>15<br>-Wrap | White | Basement, South side above other pipes | Non-Detect | | | | 5 |
| **TSI-06: 6" Mudded Fittings (Gray)** | **16<br>17<br>18** | **16<br>17<br>18<br>-Mudded Fitting** | **Gray** | **Basement, North side and center** | **5% Chrysotile** | **Fair** | **Y** | **30 EA** | **6** |
| TSI-06A: 6" Mudded Fittings (Gray) | 16<br>17<br>18 | 16<br>17<br>18<br>-Wrap | White | Basement, North side and center | Non-Detect | | | | 6 |
| **TSI-07: Insulation (Expansion Tank)** | **19<br>20<br>21** | **19<br>20<br>21** | **Gray** | **Basement north side** | **15% Chrysotile** | **Poor** | **Y** | **225 SF** | **7** |
| TSI-08: Interior Boiler Insulation (Gray/Tan) | 22<br>23 | 22<br>23<br>– Filler | Gray/Tan | Boilers on West side of basement | <1% Chrysotile | | | | 8 |
| TSI-08A: Interior Boiler Insulation (Gray/Tan) | 22<br>23 | 22<br>23<br>–Insulation | Gray/Tan | Boilers on West side of basement | Non-Detect | | | | 8 |
| TSI-09: 12" Fiberglass Pipe Insulation (HPS) w/ Mastic (White) | 24<br>25<br>26 | 24<br>25<br>26<br>-Insulation | Tan | Basement center | Non-Detect | | | | 9 |
| TSI-09A: 12" Fiberglass Pipe Insulation (HPS) w/ Mastic (White) | 24<br>25<br>26 | 24<br>25<br>26<br>-Mastic | Tan/ White | Basement center | Non-Detect | | | | 9 |
| MM-01: Gasket (Black) | 27<br>28 | 27<br>28 | Black | Deaerator Tank | Non-Detect | | | | 10 |
| TSI-10: Tank Wrap (White/Tan) | 29<br>30<br>31 | 29<br>30<br>31 | Tan/ White/ Rust | Deaerator Tank | Non-Detect | | | | 11 |

# Table 2

| Sample | Location | Description | Substrate | Color | Paint Condition | Lab Result (% by Weight) | Estimated Quantity | Photo No. |
|---|---|---|---|---|---|---|---|---|
| L-1 | Basement north side Condensate Tank | Condensate Tank | Metal | White | Poor | 0.042 % wt | | 1 |
| **L-2** | **Basement throughout. Concrete pad edges** | **Concrete Pad** | **Concrete** | **Yellow Green** | **Poor** | **2.7 % wt** | **70 SF** | **2** |

# APPENDIX B

# Photo Logs

## Asbestos Photo Log

## Lead-Based Paint Photo Log

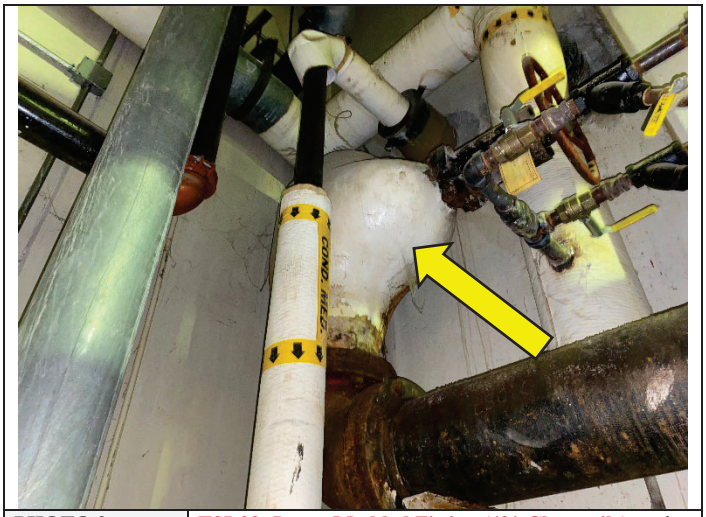
www.amienvironmental.com

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

800.828.8487 • 402.397.5001 • 402.397.3313 (fax)

| PHOTO 1 | TSI-01: Fiberglass Pipe Wrap w/ Mastic (White) 2” Pipe |
|---|---|

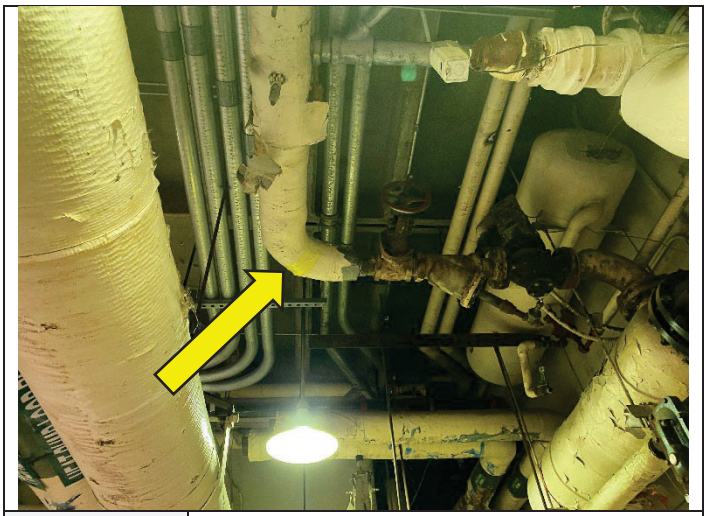
| PHOTO 2 | TSI-02: Fiberglass Pipe Wrap w/ Mastic (White) 4” Pipe |
|---|---|



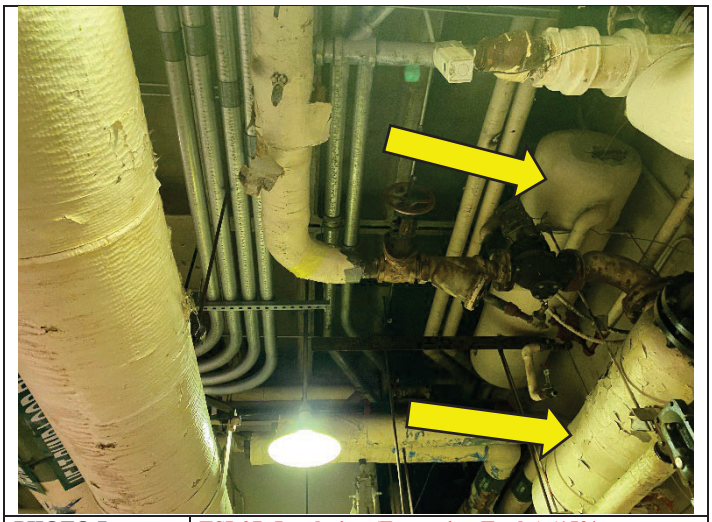
| PHOTO 3 | **TSI-03: Large Mudded Fitting (4% Chrysotile),** and non-ACM wrap. |
|---|---|

| PHOTO 4 | **TSI-04: 4” Mudded Fittings (White) (5% Amosite and 10% Chrysotile)** and non-ACM wrap. |
|---|---|

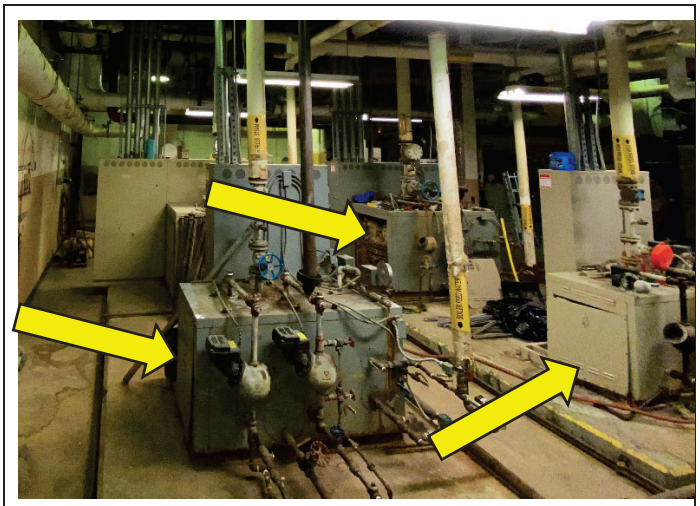
| PHOTO 5 | **TSI-05: 4” Mudded Fittings (Brown/White) (2% Chrysotile)** and non-ACM wrap. |
|---|---|



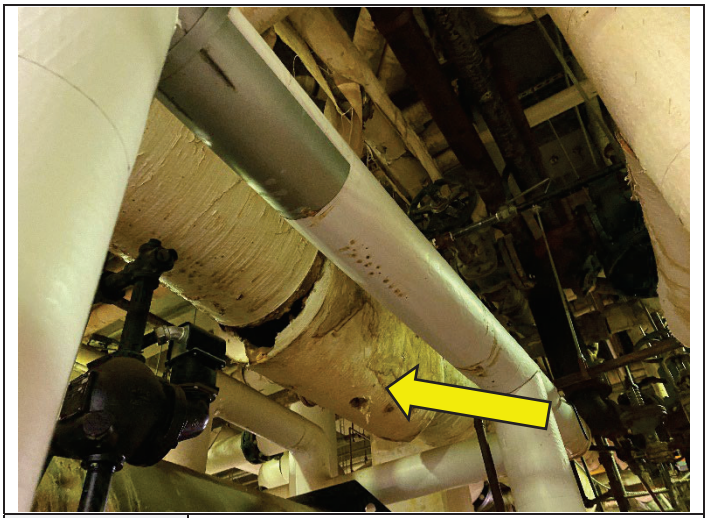
| PHOTO 6 | **TSI-06: 6” Mudded Fittings (Gray) (5% Chrysotile)** and non-ACM wrap. |
|---|---|



| PHOTO 7 | TSI-07: Insulation (Expansion Tanks) (15% Chrysotile). |
|---|---|

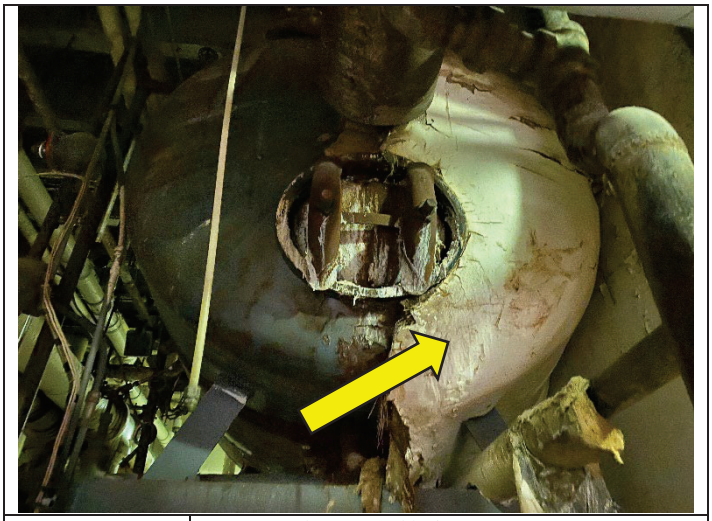


| PHOTO 8 | TSI-08 Interior Boiler Insulation and filler (<1% Chrysotile). |
|---|---|



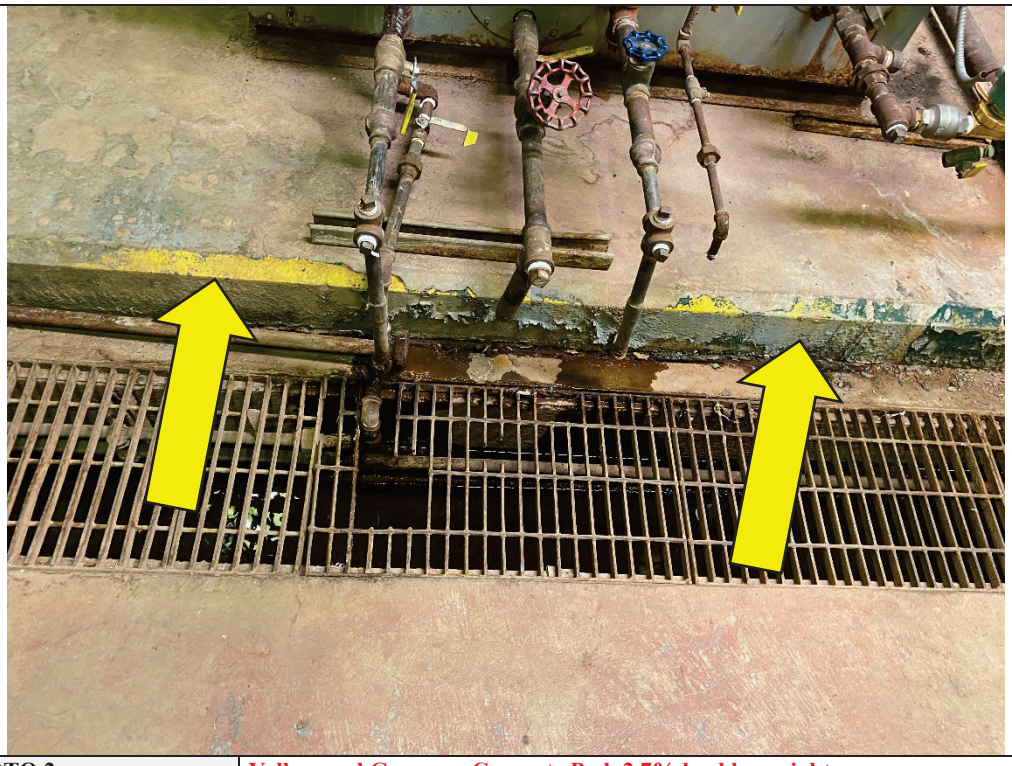
| PHOTO 9 | TSI-09: 12” Fiberglass Pipe Insulation (HPS) w/ Mastic (White) |
|---|---|

| PHOTO 10 | MM-01: Gasket, Black. |
|---|---|



| PHOTO 11 | TSI-10: Tank Wrap (White/Tan) |
|---|---|

| | |
|---|---|
| **PHOTO 1** | White on metal Condensate Tank. |



| | |
|---|---|
| **PHOTO 2** | **Yellow and Green on Concrete Pad. 2.7% lead by weight.** |

# APPENDIX C
# Laboratory Results

# 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:** | 162225586 |
| **Customer ID:** | AMI50 |
| **Customer PO:** | |
| **Project ID:** | |

| | | | |
|---|---|---|---|
| **Attention:** | Colin Lauenroth | **Phone:** | (402) 397-5001 |
| | AMI Group, Inc. | **Fax:** | (402) 397-3313 |
| | 8802 South 135th Street | **Received Date:** | 11/01/2022 9:50 AM |
| | Suite 100 | **Analysis Date:** | 11/01/2022 - 11/02/2022 |
| | Omaha, NE 68138-6511 | **Collected Date:** | 10/31/2022 |
| **Project:** | 22-275 Offutt AFB Dining Hall ACM | | |

## *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** |
| 01-Wrap<br>*162225586-0001* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White/Silver Fibrous Homogeneous | 70% Cellulose<br>10% Glass | 20% Non-fibrous (Other) | None Detected |
| 01-Mastic<br>*162225586-0001A* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 02-Wrap<br>*162225586-0002* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White/Silver Fibrous Homogeneous | 70% Cellulose<br>10% Min. Wool | 20% Non-fibrous (Other) | None Detected |
| 02-Mastic<br>*162225586-0002A* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 03-Wrap<br>*162225586-0003* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White/Silver Fibrous Homogeneous | 70% Cellulose<br>10% Glass | 20% Non-fibrous (Other) | None Detected |
| 03-Mastic<br>*162225586-0003A* | Fiberglass Pipe Wrap w/Mastic(White) 2" Pipe - Kitchen Pipes + Attic(HPS, LPS, Condensate) | White Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 04-Wrap<br>*162225586-0004* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | White/Silver Fibrous Homogeneous | 70% Cellulose<br>15% Min. Wool | 15% Non-fibrous (Other) | None Detected |
| 04-Mastic<br>*162225586-0004A* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 05-Wrap<br>*162225586-0005* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | White/Silver Fibrous Homogeneous | 65% Cellulose<br>20% Glass | 15% Non-fibrous (Other) | None Detected |
| 05-Mastic<br>*162225586-0005A* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | Yellow Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 06-Wrap<br>*162225586-0006* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | White/Silver Fibrous Homogeneous | 50% Cellulose<br>20% Glass | 30% Non-fibrous (Other) | None Detected |

Initial report from: 11/02/2022 16:01:52

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**EMSL Order:** 162225586
**Customer ID:** AMI50
**Customer PO:**
**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** |
| 06-Mastic<br>*162225586-0006A* | Fiberglass Pipe Wrap w/Mastic(White) 4" Pipe - Kitchen Pipes + Attic Pipes | Yellow<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 07-Mudded Fitting<br>*162225586-0007* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | Gray<br>Fibrous<br>Homogeneous | 30% Min. Wool | 66% Non-fibrous (Other) | 4% Chrysotile |
| 07-Wrap<br>*162225586-0007A* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | Tan/White<br>Fibrous<br>Homogeneous | 90% Cellulose | 10% Non-fibrous (Other) | None Detected |
| 08-Mudded Fitting<br>*162225586-0008* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | | | | Positive Stop (Not Analyzed) |
| 08-Wrap<br>*162225586-0008A* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | White<br>Fibrous<br>Homogeneous | 98% Cellulose | 2% Non-fibrous (Other) | None Detected |
| 09-Mudded Fitting<br>*162225586-0009* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | | | | Positive Stop (Not Analyzed) |
| 09-Wrap<br>*162225586-0009A* | Large Mudded Fitting(Gray/White) 2' Fitting - Basement South-East Corner | White<br>Fibrous<br>Homogeneous | 98% Cellulose | 2% Non-fibrous (Other) | None Detected |
| 10-Mudded Fitting<br>*162225586-0010* | 4" Mudded Fittings(White) - Basement South Side | White<br>Fibrous<br>Homogeneous | 30% Min. Wool | 55% Non-fibrous (Other) | 5% Amosite<br>10% Chrysotile |
| 10-Wrap<br>*162225586-0010A* | 4" Mudded Fittings(White) - Basement South Side | Gray/White<br>Fibrous<br>Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 11-Mudded Fitting<br>*162225586-0011* | 4" Mudded Fittings(White) - Basement South Side | | | | Positive Stop (Not Analyzed) |
| 11-Wrap<br>*162225586-0011A* | 4" Mudded Fittings(White) - Basement South Side | White<br>Fibrous<br>Homogeneous | 98% Cellulose | 2% Non-fibrous (Other) | None Detected |
| 12-Mudded Fitting<br>*162225586-0012* | 4" Mudded Fittings(White) - Basement South Side | | | | Positive Stop (Not Analyzed) |
| 12-Wrap<br>*162225586-0012A* | 4" Mudded Fittings(White) - Basement South Side | Tan<br>Fibrous<br>Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 13-Mudded Fitting<br>*162225586-0013* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | Gray<br>Fibrous<br>Homogeneous | 40% Min. Wool | 58% Non-fibrous (Other) | 2% Chrysotile |
| 13-Wrap<br>*162225586-0013A* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | White<br>Fibrous<br>Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |

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**EMSL Order:** 162225586
**Customer ID:** AMI50
**Customer PO:**
**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** |
| 14-Mudded Fittings<br>*162225586-0014* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | | | | Positive Stop (Not Analyzed) |
| 14-Wrap<br>*162225586-0014A* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | White Fibrous Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 15-Mudded Fittings<br>*162225586-0015* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | | | | Positive Stop (Not Analyzed) |
| 15-Wrap<br>*162225586-0015A* | 4" Mudded Fittings (Brown/White) - Basement, South Side Above Other Pipes | White Fibrous Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 16-Mudded Fitting<br>*162225586-0016* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | Gray Fibrous Homogeneous | 50% Min. Wool | 45% Non-fibrous (Other) | 5% Chrysotile |
| 16-Wrap<br>*162225586-0016A* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | White Fibrous Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 17-Mudded Fitting<br>*162225586-0017* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | | | | Positive Stop (Not Analyzed) |
| 17-Wrap<br>*162225586-0017A* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | White Fibrous Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 18-Mudded Fitting<br>*162225586-0018* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | | | | Positive Stop (Not Analyzed) |
| 18-Wrap<br>*162225586-0018A* | 6" Mudded Fittings(Gray) - Basement, North Side and Center | White Fibrous Homogeneous | 95% Cellulose | 5% Non-fibrous (Other) | None Detected |
| 19<br>*162225586-0019* | Insulation(Expansion Tank) - Basement, North Side | Gray Fibrous Homogeneous | 50% Min. Wool | 35% Non-fibrous (Other) | 15% Chrysotile |
| 20<br>*162225586-0020* | Insulation(Expansion Tank) - Basement, North Side | | | | Positive Stop (Not Analyzed) |
| 21<br>*162225586-0021* | Insulation(Expansion Tank) - Basement, North Side | | | | Positive Stop (Not Analyzed) |
| 22-Filler<br>*162225586-0022* | Interior Boiler Insulation(Gray/Tan) - Boilers on West Side of Basement | Gray/Tan Non-Fibrous Homogeneous | | 100% Non-fibrous (Other) | <1% Chrysotile |

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**EMSL Order:** 162225586
**Customer ID:** AMI50
**Customer PO:**
**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** |
| 22-Insulation<br>*162225586-0022A* | Interior Boiler Insulation(Gray/Tan) - Boilers on West Side of Basement | Tan<br>Fibrous<br>Homogeneous | 95% Min. Wool | 5% Non-fibrous (Other) | None Detected |
| 23-Filler<br>*162225586-0023* | Interior Boiler Insulation(Gray/Tan) - Boilers on West Side of Basement | Gray/Tan<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | <1% Chrysotile |
| 23-Insulation<br>*162225586-0023A* | Interior Boiler Insulation(Gray/Tan) - Boilers on West Side of Basement | Gray/Tan<br>Fibrous<br>Homogeneous | 95% Min. Wool | 5% Non-fibrous (Other) | None Detected |
| 24-Insulation<br>*162225586-0024* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan<br>Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| 24-Mastic<br>*162225586-0024A* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 25-Insulation<br>*162225586-0025* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan<br>Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| 25-Mastic<br>*162225586-0025A* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 26-Insulation<br>*162225586-0026* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan<br>Fibrous<br>Homogeneous | 98% Glass | 2% Non-fibrous (Other) | None Detected |
| 26-Mastic<br>*162225586-0026A* | 12" Fiberglass Pipe Insulation(HPS) w/Mastic(White) - Basement Center | Tan/White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 27<br>*162225586-0027* | Gasket(Black) - Deaerator Tank | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 28<br>*162225586-0028* | Gasket(Black) - Deaerator Tank | Black<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (Other) | None Detected |
| 29<br>*162225586-0029* | Tank Wrap(White/Tan) - Deaerator Tank | Tan/White<br>Fibrous<br>Homogeneous | 80% Cellulose<br>5% Glass | 15% Non-fibrous (Other) | None Detected |
| 30<br>*162225586-0030* | Tank Wrap(White/Tan) - Deaerator Tank | White/Rust<br>Fibrous<br>Homogeneous | 70% Cellulose<br>20% Glass | 10% Non-fibrous (Other) | None Detected |
| 31<br>*162225586-0031* | Tank Wrap(White/Tan) - Deaerator Tank | White/Rust<br>Fibrous<br>Homogeneous | 50% Cellulose<br>20% Glass | 30% Non-fibrous (Other) | None Detected |

Initial report from: 11/02/2022 16:01:52

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| | |
|---|---|
| **EMSL Order:** | 162225586 |
| **Customer ID:** | AMI50 |
| **Customer PO:** | |
| **Project ID:** | |

Analyst(s)

*Alison Pacey (30)*
*Ross Matlock (14)*

Asbestos Laboratory Manager
or Other Approved Signatory



Initial report from: 11/02/2022 16:01:52

**EMSL Analytical, Inc.**
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Phone/Fax: (317) 803-2997 / (317) 803-3047
http://www.EMSL.com indianapolislab@emsl.com

| | |
|---|---|
| EMSL Order: | 162225523 |
| CustomerID: | AMI50 |
| CustomerPO: | 22-275 |
| ProjectID: | |

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

| | |
|---|---|
| Phone: | (402) 397-5001 |
| Fax: | (402) 397-3313 |
| Received: | 11/1/2022 09:50 AM |
| Collected: | 10/31/2022 |

Project: **22-275, OFFUTT AFB DINING HALL LBP, OFFUTT AFB, NEBRASKA**

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

| *Client SampleDescription* | *Collected* | *Analyzed* | *Weight* | *RDL* | *Lead* ***Concentration*** |
|---|---|---|---|---|---|
| L-1 | 10/31/2022 | 11/1/2022 | 0.2542 g | 0.0080 % wt | 0.042 % wt |
| *162225523-0001* | Site: BASEMENT, N SIDE, CONDENSATE TANK PAINT (METAL), WHITE | | | | |
| L-2 | 10/31/2022 | 11/1/2022 | 0.2595 g | 0.080 % wt | 2.7 % wt |
| *162225523-0002* | Site: BASEMENT, THROUGHOUT (EDGES OF PADS), CONCRETE PAD PAINT, YELLOW GREEN | | | | |

Aleksandrea Kuchenbrod

Aleksandrea Kuchenbrod, Inorganic Chemistry
Lab Manager
or other approved signatory

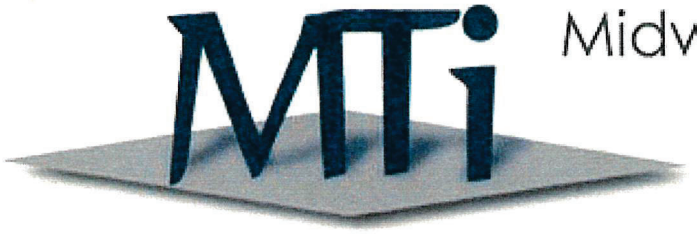

* Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, IN AIHA-LAP, LLC-ELLAP 157245, OH E10040

Initial report from 11/02/2022 07:48:40

# APPENDIX E

# Inspector Credentials



# Midwest Training Institute

*"A Higher Standard of Training"*

An ATC Company

This is to **certifies that**

## Colin Lauenroth

**has completed the requisite training for asbestos accreditation under TSCA Title II, 15 U.S.C. 2646 and the State of Nebraska Asbestos Regulations and passed the associated examination with a score of 70% or better.**

EPA AHERA/Nebraska Asbestos Inspector Refresher Course


**Midwest Training Institute, Inc.**
**10731 Mockingbird Drive**
**Omaha, NE 68127**
**(402) 505-2940**
**(402) 515-0585**
**www.midwesttrainingsite.com**


**Course Location:**
**Omaha, NE**

*Instructor*

**Course Date:** 06/28/2022
**Examination Date:** 06/28/2022
**Expiration Date:** 06/28/2023
**Certificate #** MTITB 01125
**Course Length – 4 Hours**

# State of Nebraska

**Department of Health and Human Services**
**Division of Public Health**

Colin J Lauenroth

Asbestos Inspector

**License #:** 1402 **Expiration:** 09/15/2024

**Status:** Active

# Midwest Training Institute

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This **certifies that**

## Dustin Wessel

**has completed the requisite training for asbestos accreditation under TSCA Title II, 15 U.S.C. 2646 and the State of Nebraska Asbestos Regulations and passed the associated examination with a score of 70% or better.**

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**Omaha, NE 68127**
**(402) 505-2940**
**(402) 515-0585**
**www.midwesttrainingsite.cor**

**Course Location:**
**Omaha, NE**

*Instructor*

**Course Date:** 06/29/2022
**Examination Date:** 06/29/2022
**Expiration Date:** 06/28/2023
**Certificate #** MTITB 01126
**Course Length – 4 Hours**

# State of Nebraska

**Department of Health and Human Services**
**Division of Public Health**

Dustin J Wessel

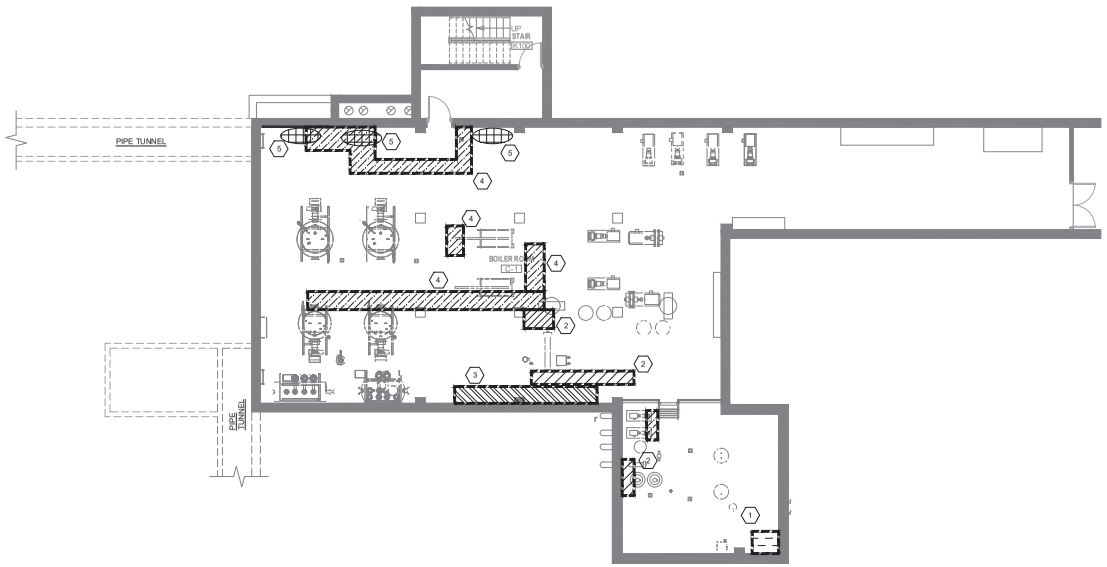
Asbestos Inspector

**License #:** 1207 **Expiration:** 02/11/2024

**Status:** Active

# APPENDIX D

# Schematics




1 BASEMENT 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 REPORTS BY AMI ENVIRONMENTAL, DATED SEPTEMBER 4, 2020 & NOVEMBER 22, 2022 FOR MORE INFORMATION ABOUT ACMS & LBPS 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 AND VPIH.

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

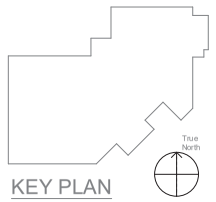
3. FIRE DOORS WITHIN THE PROJECT LIMITS ARE ASSUMED ACM. TESTING SHOULD BE DONE AT CONSTRUCTION PHASE OR ASSUME ACM.

4. COORDINATE NEGATIVE AIR DISCHARGE LOCATIONS WITH GENERAL CONTRACTOR, OWNER'S REPRESENTATIVE, AND VPIH, IF NEEDED.

5. THE ABATEMENT CONTRACTOR SHALL WORK CLOSELY WITH THE GENERAL CONTRACTOR, CONTRACTING OFFICER, OWNER OR OWNER'S REPRESENTATIVE, AND/OR THE VPIH TO COORDINATE REMOVAL OF ACM IN ACCORDANCE WITH PROJECT SCHEDULING, SEQUENCING, AND PHASING REQUIREMENTS. SOME AFTER HOURS AND WEEK-END WORK MAY BE REQUIRED. PHASING IS SUBJECT TO CHANGE TO ACCOMMODATE SITE CONDITIONS AND FACILITY OPERATIONS.

**SUMMARY OF ASBESTOS CONTAINING MATERIALS**

| LEGEND | DESCRIPTION | FRIABLE | EST. QTY. | LEGEND |
|---|---|---|---|---|
| 1 | LARGE MUDDED FITTING (GRAY/WHITE) | NO | 3 EA | |
| 2 | MUDDED FITTING (WHITE) | NO | 12 EA | |
| 3 | MUDDED FITTING (BROWN/WHITE) | NO | 6 EA | |
| 4 | MUDDED FITTING (GRAY) | NO | 30 EA | |
| 5 | EXPANSION TANK INSULATION (GRAY) | NO | 225 SF | |




KEY PLAN

35% DESIGN SUBMITTAL

Offutt Air Force Base

APPROVED

| SIGNATURE | OFFICE |
|---|---|
| | |

COORDINATION

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

DESIGN FIRM

| Designer | Project Manager |
|---|---|
| C.J.L. | TMW |
| Drafter | Date |
| M.E.T. | 11/29/2022 |

| REVISION | BY/DATE |
|---|---|
| | |

SHEET TITLE
**ASBESTOS CONTAINING MATERIAL LOCATIONS**

**HA100**

SHEET | OF

PROJECT TITLE
**REPAIR HVAC B324**

Project Number
**SGBP 20-0041**

| Drawing Number | Facility Number |
|---|---|
| Off-B-6449 | B324 |

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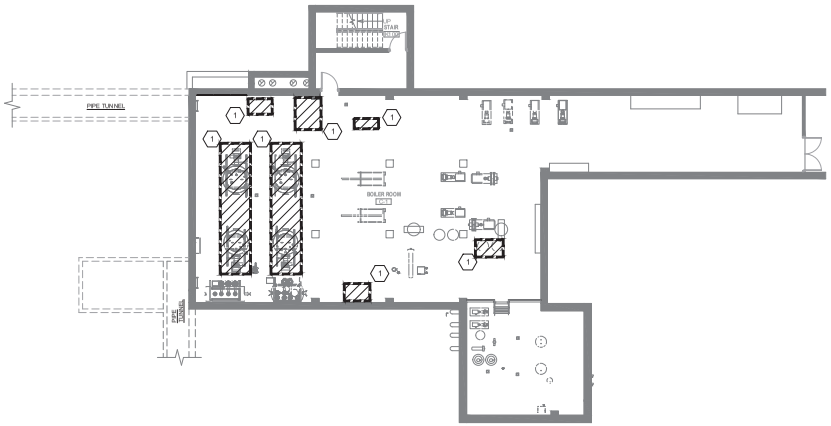



1 BASEMENT FLOOR PLAN
SCALE: 3/32" = 1'-0"

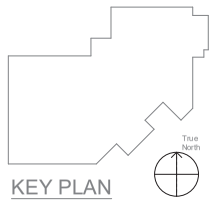
LEAD NOTES

LEAD-BASED PAINT:

1. LEAD-BASED PAINT (LBP) ARE PAINTS THAT CONTAIN LEAD ≥1.0 mg/m² or ≥0.5 PERCENT BY WEIGHT. PAINT CONTAINING LEAD (PCL) IS PAINT WITH A DETECTABLE LEVEL OF LEAD. LBP AND PCL ARE KNOWN TO EXIST ON MATERIALS, COMPONENTS, AND SURFACES THAT MAY BE DISTURBED, PENETRATED, REFINISHED, OR DEMOLISHED. PERFORM DEMOLITION OF MATERIALS AND COMPONENTS WITH LBP AND/OR PCL IN ACCORDANCE WITH APPLICABLE REGULATIONS AND THE APPROVED WORK PLAN.
2. DEMOLITION SHALL BE CONDUCTED IN ACCORDANCE WITH APPLICABLE STATE REGULATIONS AND UFGS 02 83 00 - LEAD REMEDIATION.
3. REFER TO THE HAZARDOUS BUILDING MATERIALS INSPECTION REPORT BY AMI ENVIRONMENTAL, DATED NOVEMBER 22, 2022, FOR INFORMATION CONCERNING THE PRESENCE OF LBP AND PCL IN THE PROJECT AREAS.

SUMMARY OF LEAD-BASED MATERIALS

| KEY NOTE | DESCRIPTION | CONDITION | EST. QTY. | HATCHING |
|---|---|---|---|---|
| 1 | CONCRETE PAD EDGE PAINT (YELLOW/GREEN) | POOR | 70 SF | |



KEY PLAN

35% DESIGN SUBMITTAL

Offutt Air Force Base

APPROVED

| SIGNATURE | OFFICE |
|---|---|
| | |

COORDINATION

| | |
|---|---|
| | |

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

DESIGN FIRM

| | |
|---|---|
| Designer: C.J.L. | Project Manager: TMW |
| Drafter: M.E.T. | Date: 11/29/2022 |

| REVISION | BY/DATE |
|---|---|
| | |

SHEET TITLE
LEAD-BASED PAINT MATERIAL LOCATIONS
HL100

SHEET | OF

PROJECT TITLE
REPAIR HVAC B324

Project Number: SGBP 20-0041

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