HAZARDOUS BUILDING MATERIALS INSPECTION REPORT

Sioux Falls VA Medical Center

New SPS Addition

Sioux Falls, South Dakota

VA Project No: 438-460

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1. SURVEY OVERVIEW

On April 17, 2019, Building 5, First Floor Microbiology Lab area at the Veterans Affairs Medical Center, Sioux Falls, South Dakota, were inspected for asbestos-containing material (ACM) and lead-based paint (LBP) by a representative of AMI Environmental (AMIE). The hazardous building materials inspection was conducted in preparation for renovation of the space. The renovation project is hereinafter referred to as The Project. The inspection was initiated at the request of Mr. Joel Simonyak of FourFront Design Inc. on behalf of the VA Medical Center.

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

1.1. Purpose and Scope

The purpose and scope of the inspection was to identify and sample suspect ACMs, LBPs or other lead containing building materials present in the project area that may be impacted by The Project.

1.1.1. Inspection Area

The hazardous building materials inspection of the limited project area included all accessible interior areas of the Microbiology Lab area, as identified in the project schematics, and the exterior surfaces of Building 5 to the limits of the project. The project is expected to impact the above grade to approximately first floor. The Project area of Building 5 also included a below grade mechanical room, accessed from outside the building. Also included was a tunnel, accessed from the first-floor stairwell. The tunnel consisted of a concrete floor and approximately 100 ft in length. The above described areas are hereinafter referred to collectively as the Inspection Area.

1.1.2. Limitations

Nondestructive sampling protocols prevented inspection and sampling of materials inside walls and other inaccessible areas of the building. Examples of suspect materials not sampled, include those which may exist inside finished interior walls, pipe chases and rigid ceilings.

It is recommended that prior to or during construction that any new materials discovered in the demolition process be tested or abated.

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 renovation activities; applicable protocols established by the Asbestos Hazard Emergency Response Act (AHERA) (ref.: 40 CFR 763). There is also no licensing requirement for lead paint sampling in non-HUD facilities.

The State of South Dakota licenses asbestos inspectors to perform asbestos inspections in the State of South Dakota.

2. BUILDING INFORMATION

2.1. General Construction

This project involves the provision of approximately 10,800 gross square feet for a Sterile Processing Service (SPS) Addition on the property of the Sioux Falls VA Health Care System. 8,500 gross square feet as new and 2,300 gross square feet as renovated space.

2.2. Pre-Existing Information

Information on previous surveys or sampling for lead-based paint or asbestos, within the Building 5 Inspection Area, was not provided.

3. INSPECTION METHODOLOGIES

3.1. Asbestos Inspection

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 South Dakota 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, for worker exposure.

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. 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 and analyzed separately by laboratory analysis.

3.1.3. Bulk Sampling

Bulk sampling must be performed to determine whether suspect building 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). 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.

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 50 asbestos bulk samples were collected and submitted for laboratory analysis. PLM Analysis was performed on the 50 samples collected, including 23 additional distinct layers (i.e. mastic). Heterogeneous applications are individual layers of different materials contained within a single bulk sampled, each of which must be analyzed individually to determine its asbestos content (e.g. vinyl floor tiles and mastic; cove base and mastic; etc.). Table 1 lists all samples collected and analyzed in the current survey.

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 D for the current inspection.

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 X-Ray Fluorescence (XRF) 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 in the XRF analysis.

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 equal to or greater than 0.5 percent lead by weight or equal to or greater than 1 mg/cm^2.

3.2.2. Homogenous Paint Applications Numbering Convention

Homogenous paints and coatings are assigned a unique homogeneous material number (HM#). The HM# is referenced throughout the report to uniquely identify each paint application.

3.2.3. Lead-based Paint and Lead Containing Materials Sampling

Sampling of suspected lead-based paint or other suspected lead containing materials was conducted using an X-Ray Fluorescence (XRF) instrument for the paint applications and materials identified. A total of 89 lead-based paint readings were taken using the XRF to determine the lead content of materials or painted surfaces.

3.3. Mold Inspection

The Project area was inspected for evidence of moisture intrusion or visible suspected mold.

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

Below is a summary of the findings of the asbestos inspection:

- Black mastic under 12" x 12" VFT patched area in main lab (50 ft^2)
  The VFT is considered ACM since it is associated with the black mastic present on the underside of the VFT applications. Both VFT and Black Mastic are considered ACM.-
- Black mastic in Rm D20 (Mechanical Room) Not associated with VFT. (44 ft^2)

Please refer to Table 1 – Asbestos Sampling Table in Appendix A for a complete listing of all asbestos sampling.

4.2. Lead Paint Inspection Findings

Below is a summary of the findings of the lead-based paint inspection:

- LBP, brown, is present is present on exterior hand railings, near the entrance of the below grade mechanical room. (Approximately 150 linear ft.)
- LBP, brown, is present on decorative grates within the brick on exterior of the first floor of the building. (15 sq. ft.)
- LBP, white is present on top plate of 11 exterior windows (44 sq. ft.)
- LBP, brown, is present is present on interior hand railings on stairs leading to the tunnel. (Approximately 25 linear ft.)
- LBP, brown, is present on stairs leading to the tunnel. (100 sq. ft.)
- LBP, gray, is present on a ladder in the tunnel. (1 each)
- LBP, white, is present on window sills in the interior windows of the Inspection Area. (50 sq. ft.)

Please refer to Table 2 – Lead Paint Sampling Table in Appendix A for a complete listing of all lead-based paint sampling.

4.3. Mold & Water Intrusion Inspection Findings

No suspected mold was observed in the Inspection Area.

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.

5.3. Mold

Molds have the potential to cause health problems in some individuals. Molds produce allergens (substances that can cause allergic reactions), irritants, and in some cases, potentially toxic substances (mycotoxins). Inhaling or touching mold or mold spores may cause allergic reactions in sensitive individuals. Allergic responses include hay fever-type symptoms, such as sneezing, runny nose, red eyes, and skin rash (dermatitis). Allergic reactions to mold are common and can be immediate or delayed. Molds can also cause asthma attacks in people with asthma who are allergic to mold.

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. While partial abatement may be technically possible, it is often impractical and not cost-effective.

ACMs not impacted by renovation or demolition activities should be inspected annually and maintained in good condition. ACMs deemed to be in less than good condition (damaged or significantly damaged) should be repaired or removed and replaced. Such repairs should be performed by qualified persons and in accordance with regulatory guidelines.

6.1.2. Lead-Based Paint and Lead Containing Materials

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.

Based on the initial lead paint testing results, AMIE recommends TCLP testing be conducted on the existing building materials, painted and unpainted, prior to the start of renovation or demolition activity. In addition, trade contractors who work in the facility should also be notified of the presence of lead so that they can appropriately monitor and protect their workers against lead exposure.

Any lead-based painted building components not removed during renovation should be considered for inclusion in a facility management plan that maintains potential exposure below OSHA action levels and ensures the material will be handled properly and in accordance with applicable regulations.

6.1.3. Mold

No suspected mold was observed in the Inspection Area.

6.2. Hazardous Conditions Recommendations

No hazardous conditions, from hazardous materials, were observed in the building during the inspection.

6.3. Point Count Analysis / TEM Chatfield Analysis Recommendations

AMIE does not recommend Point Count or TEM Chatfield analysis of any of the ACMs identified.

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, another notification is required.

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 one percent or less 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 South Dakota Asbestos Removal Regulations

Asbestos Containing Building Material (ACBM) should only be removed by licensed and accredited contractors in the State of South Dakota.

7.2. Lead Waste

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.

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	Mastic	Gray	Below Grade Mech. Room	None Detected		
1	2	2	Mastic	Gray	Below Grade Mech. Room	None Detected		
2	3	3	EFIS	Gray	Below Grade Mech. Room	None Detected		
2	4	4	EFIS	Gray	Below Grade Mech. Room	None Detected		
2	5	5	EFIS	Gray	Below Grade Mech. Room	None Detected		
3	6	6	Tar behind EFIS	Black	Below Grade Mech. Room	None Detected		
3	7	7	Tar behind EFIS	Black	Below Grade Mech. Room	None Detected		
4	8	8	Caulk	White	Mech. Room Entry	None Detected		
4	9	9	Caulk	White	Mech. Room Entry	None Detected		
5	10	10	Window Caulk	Gray	Windows-Exterior	None Detected		
5	11	11	Window Caulk	Gray	Windows-Exterior	None Detected		
6	12	12	Concrete Caulk	Gray	Exterior	None Detected		
6	13	13	Concrete Caulk	Gray	Exterior	None Detected		
7	14	14	Vertical Joint Caulk	Gray	Exterior	None Detected		
7	15	15	Vertical Joint Caulk	Gray	Exterior	None Detected		
8	16	16	Debris	N/A	Floor of Tunnel	None Detected		
8	17	17	Debris	N/A	Floor of Tunnel	None Detected		
9	18	18	Ceiling Tile 2x2	White	Rm D17	None Detected		
9	19	19	Ceiling Tile 2x2	White	Rm D17	None Detected		
10	20	20	Drywall	White	Rm D17	None Detected		
11	20A	20	Joint Compound	White	Rm D17	None Detected		
10	21	21	Drywall	White	Rm D17	None Detected		
11	21A	21	Joint Compound	White	Rm D17	None Detected		
12	22	22	Window Caulk	Black	Lab	None Detected		
12	23	23	Window Caulk	Black	D17	None Detected		
13	24	24	Ceiling Tile 2x2	White	Hallway	None Detected		
14	25	25	Base Cove Mastic	Yellow	Rm D21	None Detected		
14	26	26	Base Cove Mastic	Yellow	Rm D21	None Detected		
15	27	27	Carpet Mastic	Yellow	Rm D21	None Detected		
15	28	28	Carpet Mastic	Yellow	Rm D21	None Detected		

Homogeneous Area	Sample No.	Photo No.	Description	Color	Material Location	Asbestos Content	Estimated Quantity	Comments
15	29	29	Mastic Under Carpet	Yellow	Rm D21	None Detected		
16	29A	29	12” x 12” VFT/Mastic Under Carpet-Beige	Beige	Rm D21	None Detected		
17	29B	29	Mastic Under Carpet	Black	Rm D21	None Detected		
17	30	30	Mastic Under Carpet	Black	Rm D21	None Detected		
16	30A	30	12” x 12” VFT/Mastic Under Carpet-Beige	Beige	Rm D21	None Detected		
15	30B	30	Mastic Under Carpet	Yellow	Rm D21	None Detected		
17	31	31	Mastic Under Carpet	Black	Rm D21	None Detected		
16	31A	31	12” x 12” VFT/Mastic Under Carpet-Beige	Beige	Rm D21	None Detected		
15	31B	31	Mastic Under Carpet	Yellow	Rm D21	None Detected		
16	32	32	12” x 12” VFT Beige	Beige	Rm D27	None Detected		
17	32A	32	Mastic	Black	Rm D27	None Detected		
16	33	33	12” x 12” VFT Beige	Beige	Rm D27	None Detected		
17	33A	33	Mastic	Black	Rm D27	None Detected		
16	34	34	12” x 12” VFT Beige	Beige	Rm D27	None Detected		
17	34A	34	Mastic	Black	Rm D27	None Detected		
18	35	35	Epoxy Resin Tops	Black	Back Lab	None Detected		
19	36	36	Mastic	White	Back Lab	None Detected		
19	37	37	Mastic	White	Back Lab	None Detected		
20	38	38	Plaster	Gray	Lab	None Detected		
22	39	39	Plaster	Gray	Lab	None Detected		
23	40	40	12x12 VFT Tan Blotchy	Tan	Lab	None Detected		Patched area
24	40A	40	Mastic	Black	Lab	Positive Result	50 Ft^2	Patched area of VFT
25	40B	40	Mastic	Yellow	Lab	None Detected		
23	41	41	12” x 12” VFT Tan Blotchy	Tan	Lab	None Detected		
24	41A	41	Mastic	Black	Lab	Positive Stop (Not Analyzed)		
25	41B	41	Mastic	Yellow	Lab	None Detected		
23	42	42	12” x 12” VFT Tan Blotchy	Tan	Lab	None Detected		
24	42A	42	Mastic	Black	Lab	Positive Stop (Not Analyzed)		

25	42B	42	Mastic	Yellow	Lab	None Detected		
26	43	43	Mastic	Black	Mech. Room (Rm D20)	Positive Result	44 ft^2	No Tile Associated with this mastic
26	44	44	Mastic	Black	Mech. Room (Rm D20)	Positive Stop (Not Analyzed)		
27	45	45	Firestop	Red	Mech. Room (Rm D20)	None Detected		
27	46	46	Firestop	Red	Mech. Room (Rm D20)	None Detected		
28	47	47	12” x 12” VFT Under Carpet-Beige	White/Red	Rm D22	None Detected		
29	47A	47	Mastic	Black	Rm D22	None Detected		
30	47B	47	Mastic	Black	Rm D22	None Detected		
28	48	48	12” x 12” VFT Under Carpet-Beige	White/Red	Rm D22	None Detected		
29	48A	48	Mastic	Black	Rm D22	None Detected		
30	48B	48	Mastic	Black	Rm D22	None Detected		
28	49	49	12” x 12” VFT Under Carpet-Beige	White/Red	Rm D22	None Detected		
29	49A	49	Mastic	Black	Rm D22	None Detected		
30	49B	49	Mastic	Black	Rm D22	None Detected		
18	50	50	Epoxy Resin Tops	Black	Rm D25	None Detected		

Table 2. Lead-Based Paint/Lead Material Content

XRF Model: NITON XLp Series Lead Analyzer, serial #24794

Lead-Based Paint = ≥ 1 mg/cm²

Sample No.	Photo No.	Substrate	Description	Location	Color	Lead Content	Condition	Estimated Quantity
1		Metal	Electrical Panel	Mech Rm	Grey	0.00	Good	
2		Concrete	Wall	Mech Rm	White	0.00	Fair	
3		Concrete	Wall	Mech Rm	Red	0.00	Fair	
4		Metal	Duct	Mech Rm	Grey	0.00	Fair	
5		Metal	Frame	Mech Rm	Red	0.01	Fair	
6		Concrete	Wall	Mech Rm	Red	0.00	Good	
7		Metal	Tank	Mech Rm	Silver	0.01	Fair	
8		Metal	Mixing Chamber	Mech Rm	Red	0.25	Fair	
9		Wood	Panel	Mech Rm	Grey	0.00	Fair	
10		Metal	Casing	Mech Rm	Grey	0.01	Good	
11		Metal	Mixing Chamber	Mech Rm	Red	0.50	Good	
12		Metal	Valve	Mech Rm	Red	0.60	Fair	
13		Metal	Breaker Box	Mech Rm	Grey	0.01	Good	
14		Metal	Breaker Box	Mech Rm	Grey	0.00	Good	
15		Metal	Pipe	Mech Rm	Red	0.02	Good	
16		Metal	Conduit	Mech Rm	White	0.00	Fair	
17		Metal	Pipe	Mech Rm	White	0.00	Fair	
18		Metal	Overhead Tank	Exterior	Grey	0.02	Fair	
19		Metal	Window Frame	Exterior	Black	0.00	Good	
20		Metal	Window	Exterior	Black	0.00	Good	
21		Metal	Door (inside)	Exterior	Red	0.06	Fair	
22		Metal	Door (outside)	Exterior	Black	0.00	Good	
23		Metal	Door (outside)	Exterior	Brown	0.00	Good	
24		Metal	Hand Railing	Exterior	Brown	1.7	Fair	150 linear ft
25		Metal	Pipe	Exterior	Red	0.00	Fair	
26		Metal	Flashing	Exterior	Black	0.00	Good	
27		Metal	Duct (Ext)	Exterior	Red	0.00	Fair	
28		Metal	Panel	Exterior	Brown	0.00	Good	
29		Metal	Grate	Exterior	Brown	10.20	Poor	15 ft²
30		Metal	Door	Exterior	Black	0.00	Good	
31		Metal	Window Frame	Exterior	Silver	0.00	Good	
32		Metal	Window Top Plate	Exterior	White	15.00	Poor	44 ft²
33		Metal	Pipe	Crawl Space	Black	0.00	Fair	
34		Metal	Pipe	Crawl Space	Black	0.00	Fair	

35		Metal	Pipe	Crawl Space	Black	0.00	Fair	
36		Metal	Pipe	Crawl Space	Black	0.00	Fair	
37		Metal	Pipe	Crawl Space	Black	0.00	Fair	
38		Metal	Pipe	Crawl Space	Black	0.02	Fair	
39		Metal	Handrail	Crawl Space	Brown	3.80	Fair	25 linear ft.
40		Metal	Stairs	Crawl Space	Brown	2.90	Fair	100 ft^2
41		Metal	Ladder	Crawl Space	Grey	3.10	Fair	1 each
42		Metal	Valve	Crawl Space	Silver	0.00	Good	
43		Metal	Breaker Box	Crawl Space	Grey	0.06	Good	
44		Metal	Pipe	Crawl Space	Red	0.02	Good	
45		Clay	Block	Crawl Space	Red	0.00	Good	
46		Ceramic	Tile	D-17	Cream	0.00	Good	
47		Metal	Cabinet	D-17	Beige	0.00	Good	
48		Metal	Upper Cabinet	D-17	Beige	0.02	Good	
49		Metal	Door Frame	D-17	Beige	0.02	Good	
50		Ceramic	Floor	D-17	Beige	0.00	Good	
51		Metal	Cabinet	D-17	Beige	0.00	Good	
52		Metal	Pipe	D-17	Black	0.00	Good	
53		Sheetrock	Wall	Hallway	White	0.00	Good	
54		Metal	Grate	Hallway	White	0.00	Good	
55		Metal	Grid	Hallway	White	0.00	Good	
56		Metal	Door Frame	D-18	Beige	0.00	Good	
57		Metal	Door Frame	D-22	Beige	0.00	Good	
58		Metal	Pipe	Hallway	Black	0.00	Fair	
59		Sheetrock	Wall	D-21	Cream	0.00	Fair	
60		Sheetrock	Wall	Hallway	Cream	0.00	Fair	
61		Metal	Door Frame	D-27	Beige	0.00	Good	
62		Metal	Cabinet	D-27	Beige	0.00	Good	
63		Metal	Cabinet with glass	D-27	Beige	0.00	Good	
64		Metal	File Cabinet	S. end	Cream	0.00	Good	
65		Metal	Door	S. end	Cream	0.00	Good	
66		Metal	Door Frame	S. end	Cream	0.05	Good	
67		Metal	Cabinet	S. end	Beige	0.00	Good	
68		Sheetrock	Wall	W. wall	White	0.00	Good	
69		Metal	Fume Hood	W. wall	Cream	0.01	Good	
70		Metal	Side of Fume Hood	W. wall	Cream	0.00	Good	
71		Wood	Window Sill	E. wall	White	5.30	Fair	50 ft^2
72		Wood	Vertical Window	W. wall	White	0.00	Good	
73		Sheetrock	Wall	W. wall	White	0.00	Fair	
74		Metal	Under Sink	W. wall	Black	0.00	Good	
75		Plaster	Wall	W. wall	White	0.28	Poor	

76		Plaster	Wall	W. wall	White	0.00	Good	
77		Sheetrock	Column	W. wall	White	0.00	Good	
78		Plaster	Wall	W. wall	White	0.00	Good	
79		Metal	Power Strip	W. wall	Tan	0.14	Good	
80		Metal	Transformer	D-20	Green	0.12	Good	
81		Plaster	E Wall	D-20	White	0.23	Good	
82		Plaster	N Wall	D-20	White	0.00	Good	
83		Metal	Breaker Box	D-20	Grey	0.00	Good	
84		Wood	Panel Behind Box	D-20	Grey	0.00	Good	
85		Metal	Pipe	D-20	Red	0.03	Good	
86		Porcelain	Sink	D-20	White	0.00	Good	
87		Metal	Ceiling Light Fixture	D-20	White	0.00	Good	
88		Concrete Block	Wall	D-20	Black	0.02	Good	
89		Concrete	Floor	D-20	Grey	0.00	Good	

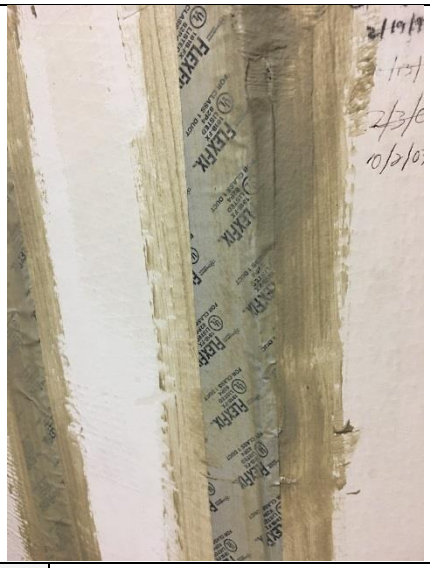

PHOTO 1	Gray Mastic – Duct in below grade mechanical room

PHOTO 2	Gray Mastic – Duct in below grade mechanical room

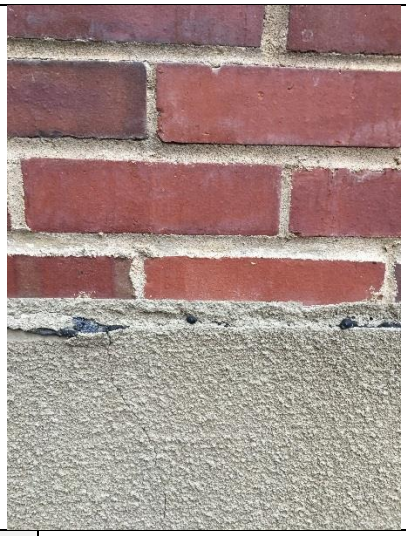

PHOTO 3	EFIS Surfacing – Mech. Room & Entry Area

PHOTO 4	EFIS Surfacing – Mech. Room & Entry Area

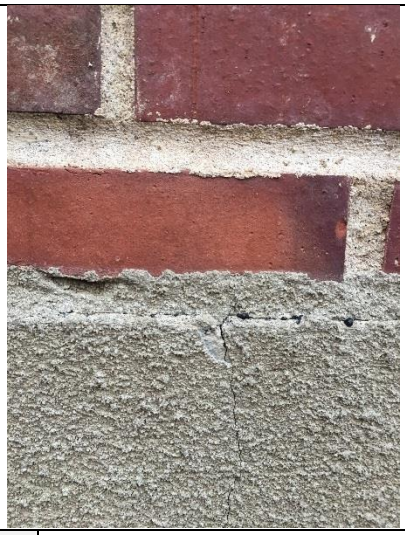

PHOTO 5	EFIS Surfacing – Mech. Room & Entry Area

PHOTO 6	Black Tar Under EFIS – Mech. Room Entry

PHOTO 7	Black Tar Under EFIS – Mech. Room Entry

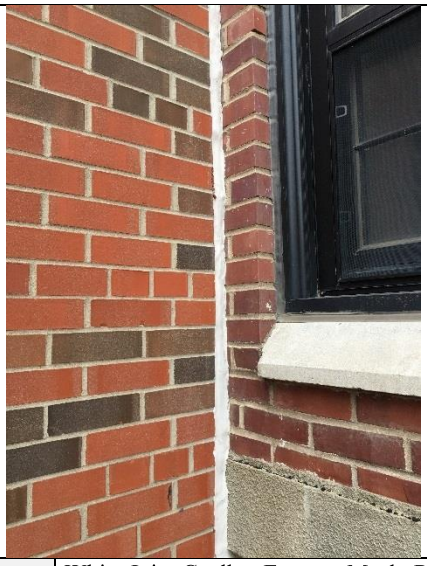

PHOTO 8	White Joint Caulk – Entry to Mech. Room

PHOTO 9	White Joint Caulk – Entry to Mech. Room

PHOTO 10	Gray Window Caulk - Exterior

PHOTO 11	Gray Window Caulk - Exterior

PHOTO 12	Gray Joint Caulk – Horizontal Concrete Pad

PHOTO 13	Gray Joint Caulk – Horizontal Concrete Pad

PHOTO 14	Gray Joint Caulk - Exterior

PHOTO 15	Gray Joint Caulk - Exterior

PHOTO 16	Debris on Tunnel Floor

PHOTO 17	Debris on Tunnel Floor

PHOTO 18	2’ x 2’ Ceiling Tile D-17

PHOTO 19	2’ x 2’ Ceiling Tile D-17

PHOTO 20	Drywall/Joint Compound D-17

PHOTO 21	Drywall/Joint Compound D-17

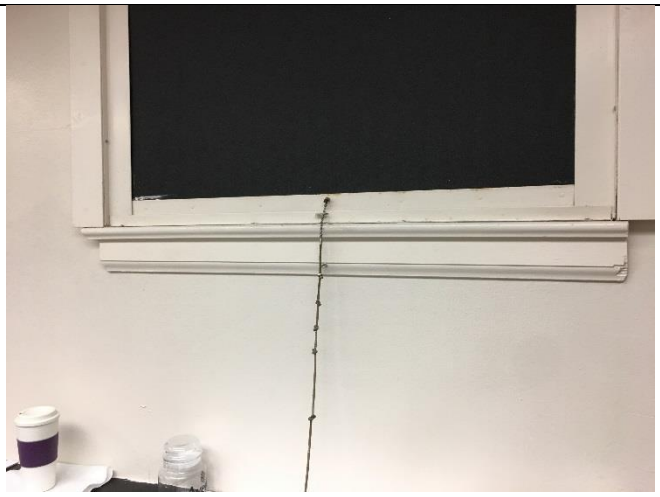

PHOTO 22	Black Window Caulk – Windows Throughout

PHOTO 23	Black Window Caulk – Windows Throughout

PHOTO 24	2’ x 2’ Ceiling Tile Hallway

PHOTO 25	Tan Base Cove Mastic

PHOTO 26	Tan Base Cove Mastic

PHOTO 27	Brown Carpet Mastic – D 21

PHOTO 28	Brown Carpet Mastic – D 21

PHOTO 29	Beige VFT Black Mastic (under carpet) – D 21

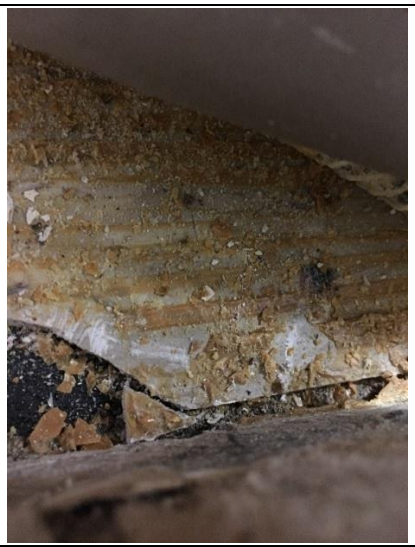

PHOTO 30	Beige VFT Black Mastic (under carpet) – D 21

PHOTO 31	Beige VFT Black Mastic (under carpet) – D 21

PHOTO 32	12” x 12” Beige VFT – D-27 (throughout space)

PHOTO 33	12” x 12” Beige VFT – D-27 (throughout space)

PHOTO 34	12” x 12” Beige VFT – D-27 (throughout space)

PHOTO 35	Epoxy Resin Bench Top - Lab

PHOTO 36	White Mastic – Lab Base Cabinets

PHOTO 37	White Mastic – Lab Base Cabinets

PHOTO 38	Plaster Wall – Lab (Exterior Wall)

PHOTO 39	Plaster Wall – Lab (Exterior Wall)

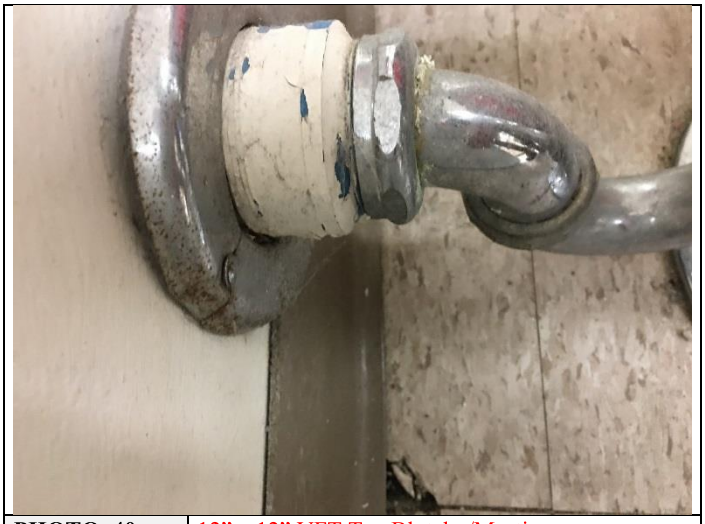

PHOTO 40	12” x 12” VFT Tan Blotchy/Mastic Black Mastic 4% Chrysotile

PHOTO 41	12” x 12” VFT Tan Blotchy/Mastic Black Mastic 4% Chrysotile

PHOTO 42	12” x 12” VFT Tan Blotchy/Mastic Black Mastic 4% Chrysotile

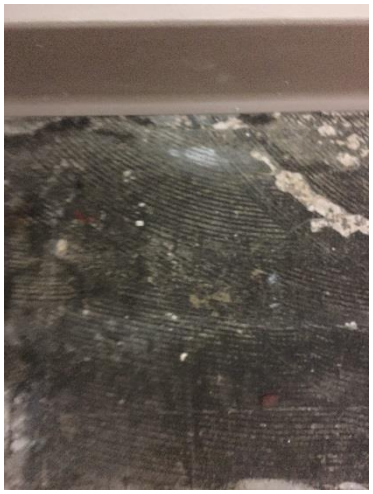

PHOTO 43	Black Mastic – D-20 5% Chrysotile

PHOTO 44	Black Mastic – D-20 5% Chrysotile

PHOTO 45	Firestop – D-20

PHOTO 46	Firestop – D-20

PHOTO 47	12” x 12” VFT Tan/Black Mastic Under Carpet D-22

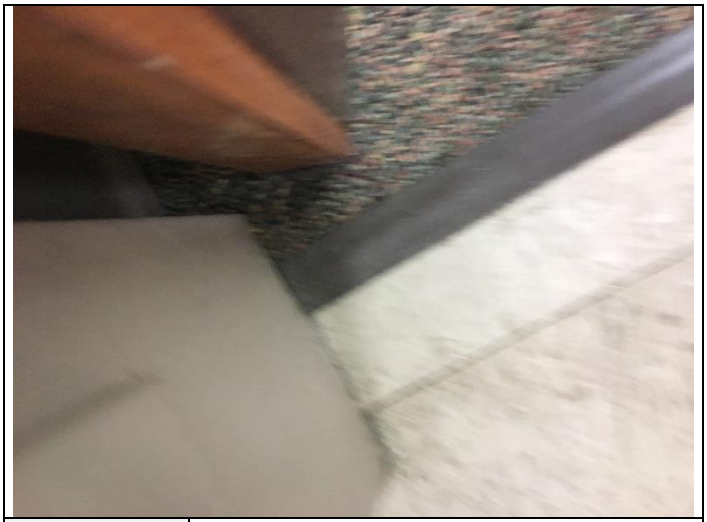

PHOTO 48	12” x 12” VFT Tan/Black Mastic Under Carpet D-22

PHOTO 49	12” x 12” VFT Tan/Black Mastic Under Carpet D-22

PHOTO 50	Black Epoxy Resin Bench Top – D-25

PHOTO 1	Electrical Panel – Below Grade Mechanical Room <1mg/cm^2 lead

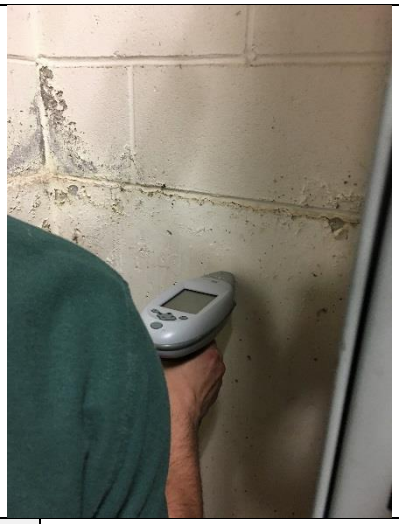

PHOTO 2	White Painted wall - Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 3	Red Base Cove Paint – Below Grade Mech. Room <1mg/cm2 lead

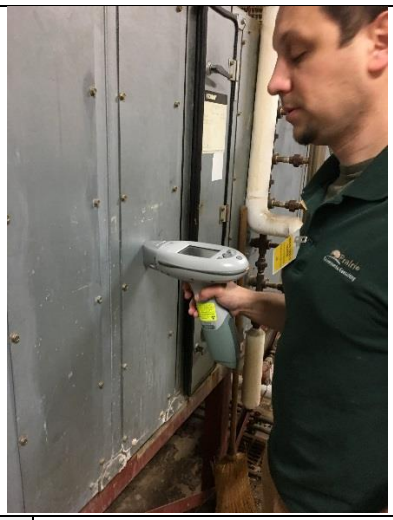

PHOTO 4	Electrical Panel – Below Grade Mechanical Room <1mg/cm^2 lead

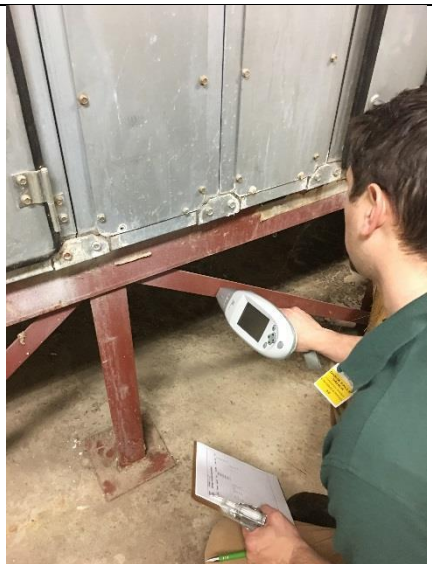

PHOTO 5	Red Painted Frame – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 6	Red Painted Block Wall – Below Grade Mech. Rm <1mg/cm^2 lead

PHOTO 7	Silver Painted Tank – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 8	Red Painted Mixing Chamber – Below Grade Mech. Room <1mg/cm^2 lead

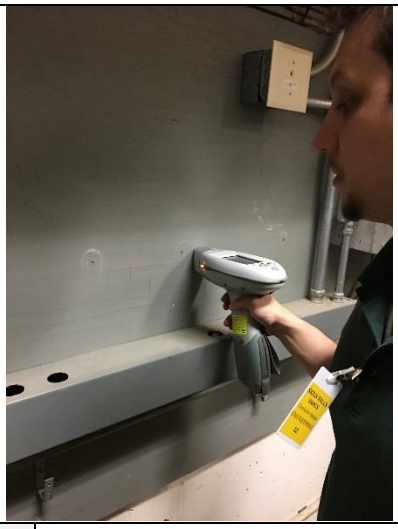

PHOTO 9	Gray Painted Wood Panel – Below Grade Mechanical Room <1mg/cm^2 lead

PHOTO 10	Gray Painted Casing – Below Grade Mechanical Room <1mg/cm^2 lead

PHOTO 11	Red Painted Mixing Chamber – Below Grade Mech. Room <1mg/cm^2 lead

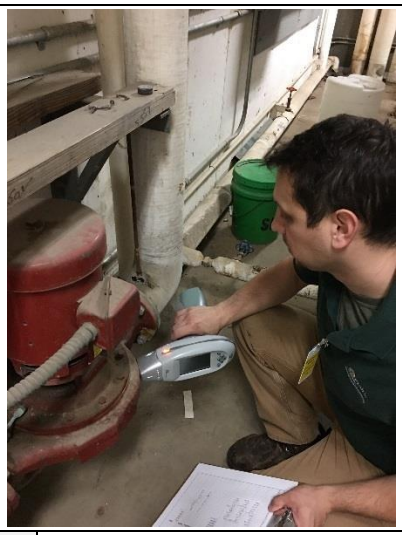

PHOTO 12	Red Painted Valve – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 13	Gray Breaker Box – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 14	Gray Breaker Box – Below Grade Mech. Room <1mg/cm^2 lead

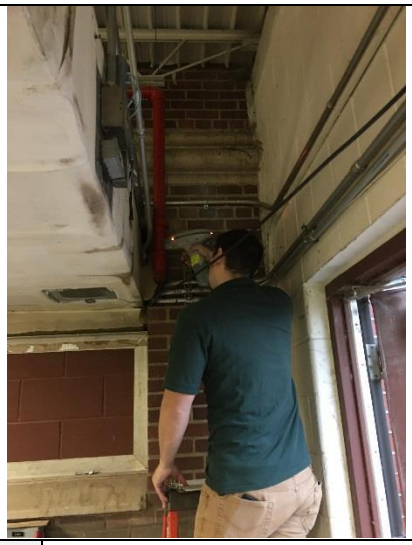

PHOTO 15	Red Painted Pipe – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 16	White Painted Conduit – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 17	White Painted Pipe – Below Grade Mech. Room <1mg/cm^2 lead

PHOTO 18	Silver Overhead Tank – Below Grade Mech. Room <1mg/cm2 lead

PHOTO 19	Black Window Frame - Exterior <1mg/cm^2 lead

PHOTO 20	Black Window - Exterior <1mg/cm^2 lead

PHOTO 21	Red Mech. Room Door (Inside) <1mg/cm^2 lead

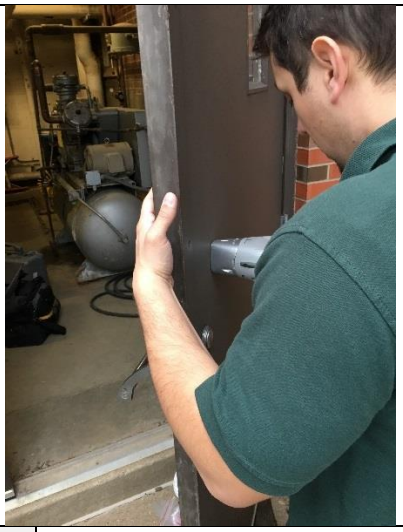

PHOTO 22	Black Mech. Room Door (Outside) <1mg/cm^2 lead

PHOTO 23	Brown Door (Outside) <1mg/cm^2 lead

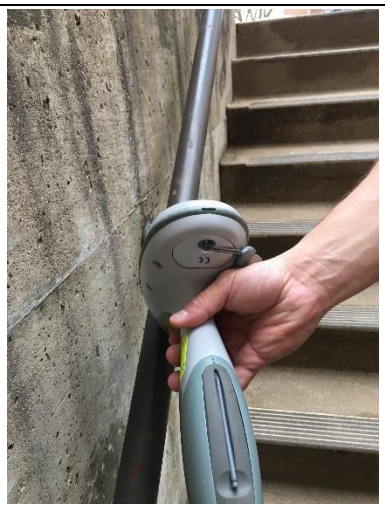

PHOTO 24	Brown Hand Railing-Stairs to Mech. Room 1.7 mg/cm^2 lead

PHOTO 25	Red Pipe - Exterior <1mg/cm2 lead

PHOTO 26	Black Flashing - Exterior <1mg/cm2 lead

PHOTO 27	Red Ventilation Duct - Exterior <1mg/cm^2 lead

NO PHOTO

PHOTO 28	Brown Metal Panel – Exterior <1mg/cm^2 lead

PHOTO 29	Red Decorative Grate on vertical wall - exterior 10.2 mg/cm^2 lead

PHOTO 30	Brown Door - Exterior <1mg/cm^2 lead

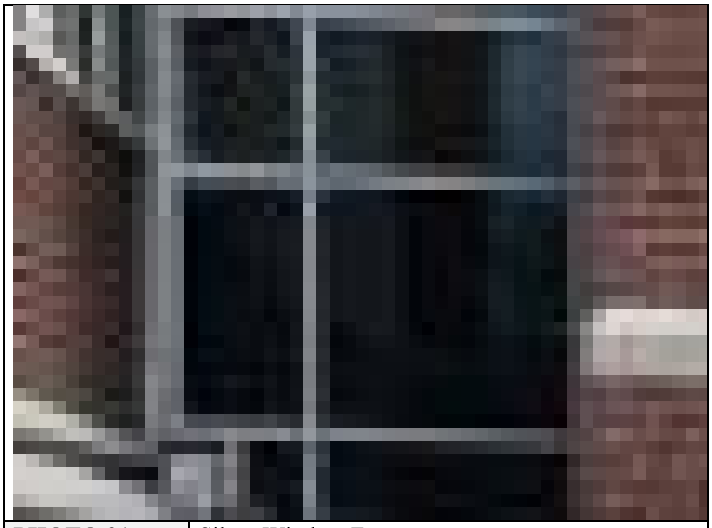

PHOTO 31	Silver Window Frame <1mg/cm^2 lead

PHOTO 32	White Top Plate – Exterior Window 15 mg/cm^2 lead

PHOTO 33	Black Pipe – Tunnel <1mg/cm^2 lead

PHOTO 34	Black Pipe – Tunnel <1mg/cm^2 lead

PHOTO 35	Black Pipe – Tunnel <1mg/cm^2 lead

PHOTO 36	Black Pipe – Tunnel <1mg/cm^2 lead

PHOTO 37	Black Pipe – Tunnel <1mg/cm^2 lead

PHOTO 38	Black Pipe – Tunnel <1mg/cm^2 lead

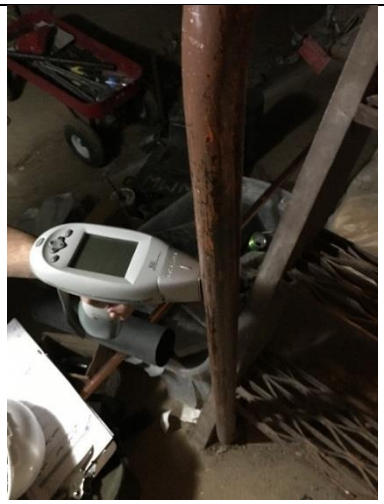

PHOTO 39	Brown Hand Railing-Stairs to Tunnel 3.8 mg/cm^2 lead

PHOTO 40	Brown Stairs to Tunnel 2.9 mg/cm^2 lead

PHOTO 41	Gray ladder in Tunnel 3.1 mg/cm^2 lead

PHOTO 42	Silver Valve - Tunnel <1mg/cm2 lead

PHOTO 43	Wall in Hallway Tower 3 <1mg/cm2 lead

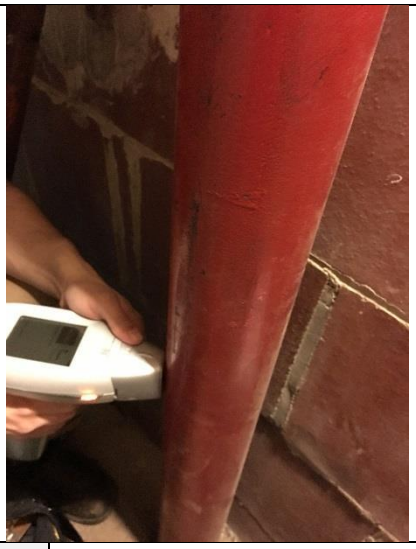

PHOTO 44	Wall in Rm.360 East Pipechase Tower 3 <1mg/cm2 lead

PHOTO 45	Metal Door Frame to East Stairwell Tower 3 <1mg/cm^2 lead

PHOTO 46	Cream Ceramic Tile – D-17 <1mg/cm^2 lead

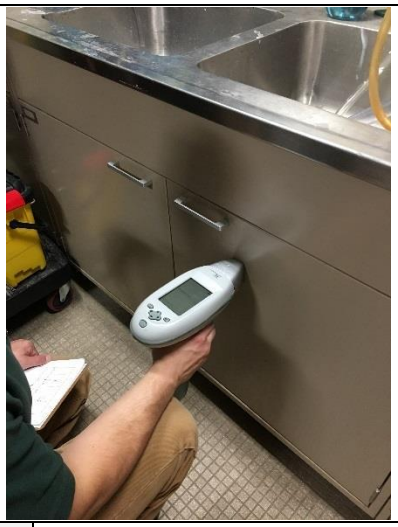

PHOTO 47	Beige Base Cabinet – D-17 <1mg/cm^2 lead

PHOTO 48	Beige Upper Cabinet – D-17 <1mg/cm^2 lead

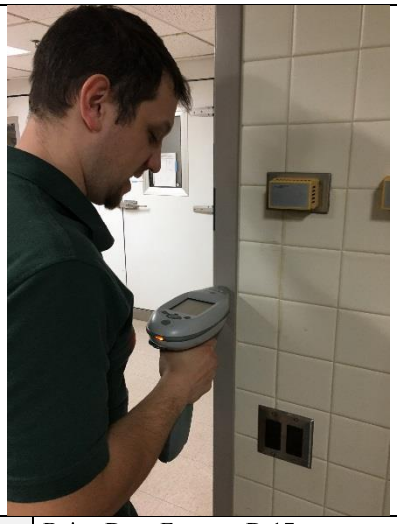

PHOTO 49	Beige Door Frame – D-17 <1mg/cm^2 lead

PHOTO 50	Beige Ceramic Tile Floor – D-17 <1mg/cm^2 lead

PHOTO 51	Beige Base Cabinet – D-17 <1mg/cm^2 lead

PHOTO 52	Black Pipe D-17 Hallway <1mg/cm^2 lead

PHOTO 53	White Painted Wall – Hallway by D-17 <1mg/cm^2 lead

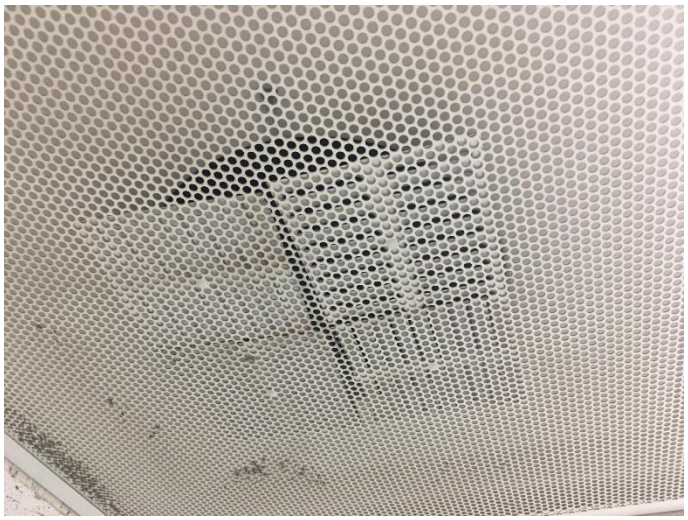

PHOTO 54	Diffuser Grate – Hallway by D-17 <1mg/cm^2 lead

PHOTO 55	Ceiling Grid Hallway by D-17 <1mg/cm^2 lead

PHOTO 56	Beige Door Frame D-18 <1mg/cm^2 lead

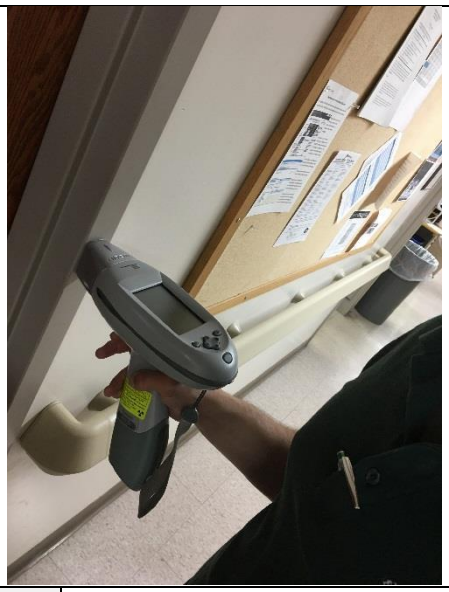

PHOTO 57	Beige Door Frame D-22 <1mg/cm^2 lead

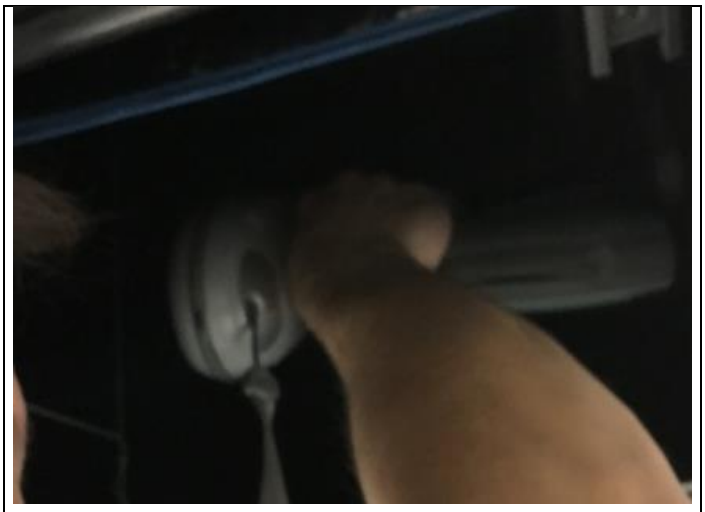

PHOTO 58	Black Pipe - Hallway <1mg/cm2 lead

PHOTO 59	Cream Painted Sheetrock Wall – Room D-21 <1mg/cm^2 lead

PHOTO 60	Cream Painted Sheetrock Wall - Hallway <1mg/cm^2 lead

PHOTO 61	Beige Door Frame Room D-27 <1mg/cm^2 lead

PHOTO 62	Beige Cabinet Room D-27 <1mg/cm^2 lead

PHOTO 63	Beige Cabinet with Glass Room D-27 <1mg/cm^2 lead

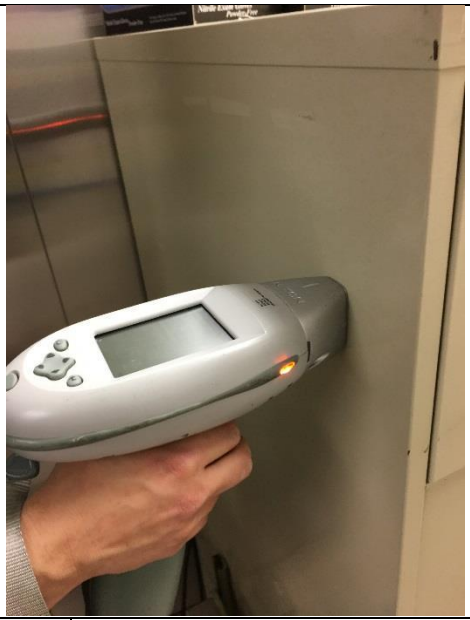

PHOTO 64	File Cabinet – S End <1mg/cm^2 lead

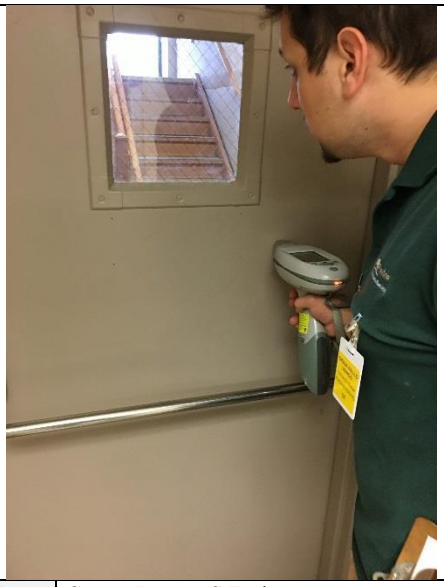

PHOTO 65	Cream Door – S End <1mg/cm^2 lead

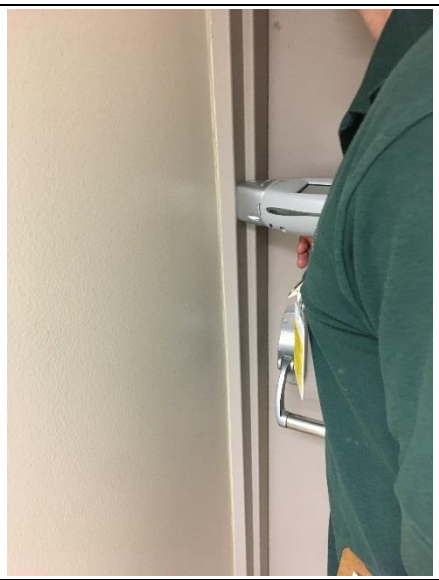

PHOTO 66	Cream Door Frame – S End <1mg/cm^2 lead

PHOTO 67	Beige Metal Cabinet – S End <1mg/cm^2 lead

PHOTO 68	White Painted Sheetrock – West Wall <1mg/cm^2 lead

PHOTO 69	Cream Fume Hood – West Wall <1mg/cm^2 lead

PHOTO 70	Cream Fume Hood – West Wall <1mg/cm^2 lead

PHOTO 71	Window Sill and Trim Below Window 5.3 mg/cm^2 lead

PHOTO 72	Non-Decorative Window Trim <1mg/cm^2 lead

PHOTO 73	White Painted Sheetrock Wall - Lab <1mg/cm^2 lead

PHOTO 74	Black Metal surrounding sink basin <1mg/cm^2 lead

PHOTO 75	Peeling White Paint Under Sink <1mg/cm^2 lead

PHOTO 76	White Paint on Plaster <1mg/cm^2 lead

PHOTO 77	White Paint on Sheetrock - Lab <1mg/cm^2 lead

PHOTO 78	Plaster on column - Lab <1mg/cm^2 lead

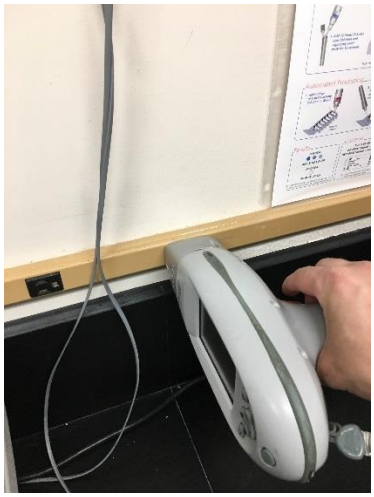

PHOTO 79	Metal Power Strip - Lab <1mg/cm^2 lead

PHOTO 80	Transformer Box – D -20 <1mg/cm^2 lead

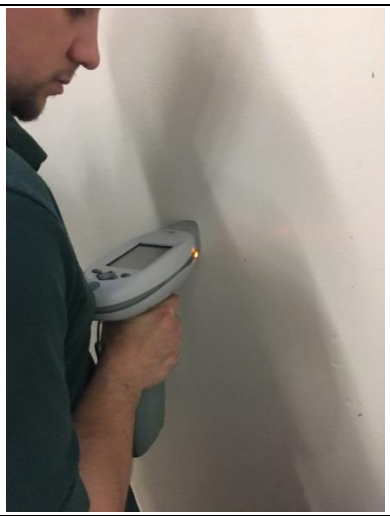

PHOTO 81	East Wall – D-20 <1mg/cm^2 lead

PHOTO 82	North Wall – D-20 <1mg/cm^2 lead

PHOTO 83	Breaker Box – D-20 <1mg/cm^2 lead

PHOTO 84	Panel behind Breaker Box – D-20 <1mg/cm^2 lead

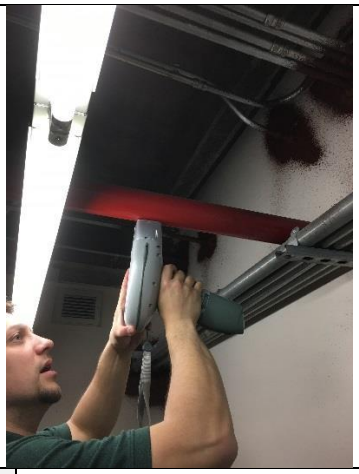

PHOTO 85	Red Metal Pipe – D-20 <1mg/cm^2 lead

PHOTO 86	Porcelain Sink – Lab <1mg/cm^2 lead

PHOTO 87	Ceiling Light Fixture <1mg/cm^2 lead

PHOTO 88	Black Concrete Wall Above Window – D-20 <1mg/cm^2 lead

PHOTO 89	Gray Concrete Floor – D-20 <1mg/cm^2 lead

EMSL Analytical, Inc.

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EMSL Order:	041910574
Customer ID:	AMI50
Customer PO:	18-00338
Project ID:	

Attention:	Bill Crowe	**Phone:**	(402) 397-5001
	AMI Group, Inc.	**Fax:**	(402) 397-3313
	8802 South 135th Street	**Received Date:**	04/19/2019 9:20 AM
	Suite 100	**Analysis Date:**	04/24/2019 - 05/01/2019
	Omaha, NE 68138-6511	**Collected Date:**	04/17/2019
Project:	18-00338 / SFVA Bldg 5 / Sioux Falls, SD		

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**
1 *041910574-0001*	Gray Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2 *041910574-0002*	Gray Mastic	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3 *041910574-0003*	EFIS	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4 *041910574-0004*	EFIS	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5 *041910574-0005*	EFIS	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6 *041910574-0006*	Tar behind EFIS	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7 *041910574-0007*	Tar behind EFIS	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
8 *041910574-0008*	White Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
9 *041910574-0009*	White Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
10 *041910574-0010*	Gray Window Caulk	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
11 *041910574-0011*	Gray Window Caulk	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
12 *041910574-0012*	Gray on Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
13 *041910574-0013*	Gray on Concrete	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
14 *041910574-0014*	Gray Joint Vertical	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
15 *041910574-0015*	Gray Joint Vertical	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
16 *041910574-0016*	Debris	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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EMSL Order:	041910574
Customer ID:	AMI50
Customer PO:	18-00338
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**
17 *041910574-0017*	Debris	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
18 *041910574-0018*	Rm D17 Ceiling Tile 2x2	Brown/Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
19 *041910574-0019*	Rm D17 Ceiling Tile 2x2	Brown/Gray/White Fibrous Homogeneous	60% Cellulose 30% Min. Wool	10% Non-fibrous (Other)	None Detected
20-Drywall *041910574-0020*	Drywall	Brown Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
20-Joint Compound *041910574-0020A*	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
21-Drywall *041910574-0021*	Drywall	White Fibrous Homogeneous	15% Cellulose 5% Glass	80% Non-fibrous (Other)	None Detected
21-Joint Compound *041910574-0021A*	Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
22 *041910574-0022*	Black Window Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
23 *041910574-0023*	Black Window Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
24 *041910574-0024*	Ceiling Tile same as 18, 19	Gray/White Fibrous Homogeneous	50% Cellulose 30% Min. Wool	20% Non-fibrous (Other)	None Detected
25 *041910574-0025*	Base Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
26 *041910574-0026*	Base Mastic	Yellow Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
27 *041910574-0027*	Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
28 *041910574-0028*	Carpet Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-Mastic *041910574-0029*	Under Carpet - Black Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-Floor Tile *041910574-0029A*	Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-Mastic 2 *041910574-0029B*	Under Carpet - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30-Mastic *041910574-0030*	Under Carpet - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30-Floor Tile *041910574-0030A*	Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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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**
30-Mastic 2 *041910574-0030B*	Under Carpet - Black Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31-Mastic *041910574-0031*	Under Carpet - Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31-Floor Tile *041910574-0031A*	Floor Tile	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
31-Mastic 2 *041910574-0031B*	Under Carpet - Black Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32-Tile *041910574-0032*	12x12 Beige	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
32-Mastic *041910574-0032A*	Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33-Tile *041910574-0033*	12x12 Beige	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
33-Mastic *041910574-0033A*	Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-Tile *041910574-0034*	12x12 Beige	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
34-Mastic *041910574-0034A*	Black Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
35 *041910574-0035*	Epoxy Resin Tops	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36 *041910574-0036*	White Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37 *041910574-0037*	White Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38 *041910574-0038*	Plaster Main Lab	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
39 *041910574-0039*	Plaster Main Lab	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40-Tile *041910574-0040*	Tan Blotchy	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
40-Mastic *041910574-0040A*	Black Mastic	Black Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
40-Mastic 2 *041910574-0040B*	Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
41-Tile *041910574-0041*	Tan Blotchy	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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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**
41-Mastic *041910574-0041A*	Black Mastic				Positive Stop (Not Analyzed)
41-Mastic 2 *041910574-0041B*	Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-Tile *041910574-0042*	Tan Blotchy	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
42-Mastic *041910574-0042A*	Black Mastic				Positive Stop (Not Analyzed)
42-Mastic 2 *041910574-0042B*	Yellow Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
43 *041910574-0043*	Black Mastic	Black Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
44 *041910574-0044*	Black Mastic				Positive Stop (Not Analyzed)
45 *041910574-0045*	Firestop	Red Fibrous Homogeneous	10% Glass	90% Non-fibrous (Other)	None Detected
46 *041910574-0046*	Firestop	Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47-Tile *041910574-0047*	Tile under Carpet	White/Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47-Mastic *041910574-0047A*	Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
47-Mastic 2 *041910574-0047B*	Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-Tile *041910574-0048*	Tile under Carpet	White/Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-Mastic *041910574-0048A*	Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
48-Mastic 2 *041910574-0048B*	Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-Tile *041910574-0049*	Tile under Carpet	White/Red Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-Mastic *041910574-0049A*	Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
49-Mastic 2 *041910574-0049B*	Mastic	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
50 *041910574-0050*	Epoxy Resin Tops	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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Analyst(s)

Alexis Kum (35)
Edward Zambrano (12)
Seri Smith (23)

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

Report amended: 05/01/2019 17:29:52 Replaces initial report from: 04/24/2019 14:56:38 Reason Code: Client-Additional Analysis

Location:	VA Medical Center, Sioux Falls, SD - Building 5 (Mech Rm, Tunnel, Lower Level)							
Inspector:	Jason Biggins, Prairie Environmental Consulting, LLC							
XRF Model: NITON XLp Series Lead Analyzer, serial #24794					Lead Paint ≥ 1.0 mg/cm²			
XRF #	Unit #	Substrate	Component	Color	Test Location	Condition	Results	Notes
1					Calibrate			Test
2					Calibrate			Test
3					Calibrate			Test
4					Calibrate			Test
5					Calibrate			Test
6					Calibrate			Test
7	Mech Rm	Metal	Electrical Panel	Grey	Mech Rm	Good	0.00	
8	Mech Rm	Concrete	Wall	White	Mech Rm	Fair	0.00	
9	Mech Rm	Concrete	Wall	Red	Mech Rm	Fair	0.00	
10	Mech Rm	Metal	Duct	Grey	Mech Rm	Fair	0.00	
11	Mech Rm	Metal	Frame	Red	Mech Rm	Fair	0.01	
12	Mech Rm	Concrete	Wall	Red	Mech Rm	Good	0.00	
13	Mech Rm	Metal	Tank	Silver	Mech Rm	Fair	0.01	
14	Mech Rm	Metal	Mixing Chamber	Red	Mech Rm	Fair	0.25	
15	Mech Rm	Wood	Panel	Grey	Mech Rm	Fair	0.00	
16	Mech Rm	Metal	Casing	Grey	Mech Rm	Good	0.01	
17	Mech Rm	Metal	Mixing Chamber	Red	Mech Rm	Good	0.50	
18	Mech Rm	Metal	Valve	Red	Mech Rm	Fair	0.60	
19	Mech Rm	Metal	Breaker Box	Grey	Mech Rm	Good	0.01	
20	Mech Rm	Metal	Breaker Box	Grey	Mech Rm	Good	0.00	
21	Mech Rm	Metal	Pipe	Red	Mech Rm	Good	0.02	
22	Mech Rm	Metal	Conduit	White	Mech Rm	Fair	0.00	
23	Mech Rm	Metal	Pipe	White	Mech Rm	Fair	0.00	
24	Exterior	Metal	Overhead Tank	Grey	Exterior	Fair	0.02	
25	Exterior	Metal	Window Frame	Black	Exterior	Good	0.00	

26	Exterior	Metal	Window	Black	Exterior	Good	0.00	
27	Exterior	Metal	Door (inside)	Red	Exterior	Fair	0.06	
28	Exterior	Metal	Door (outside)	Black	Exterior	Good	0.00	
29	Exterior	Metal	Door (outside)	Brown	Exterior	Good	0.00	
30	Exterior	Metal	Hand Railing	Brown	Exterior	Fair	1.7	150 linear ft
31	Exterior	Metal	Pipe	Red	Exterior	Fair	0.00	
32	Exterior	Metal	Flashing	Black	Exterior	Good	0.00	
33	Exterior	Metal	Duct (Ext)	Red	Exterior	Fair	0.00	
34	Exterior	Metal	Panel	Brown	Exterior	Good	0.00	
35	Exterior	Metal	Grate	Brown	Exterior	Poor	10.20	15 ft^2
36	Exterior	Metal	Door	Black	Exterior	Good	0.00	
37	Exterior	Metal	Window Frame	Silver	Exterior	Good	0.00	
38	Exterior	Metal	Window Top Plate	White	Exterior	Poor	15.00	11 windows = 44 ft
39	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.00	
40	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.00	
41	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.00	
42	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.00	
43	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.00	
44	Crawl Space	Metal	Pipe	Black	Crawl Space	Fair	0.02	
45	Crawl Space	Metal	Handrail	Brown	Crawl Space	Fair	3.80	25 ft
46	Crawl Space	Metal	Stairs	Brown	Crawl Space	Fair	2.90	100 ft^2
47	Crawl Space	Metal	Ladder	Grey	Crawl Space	Fair	3.10	1 ea
48	Crawl Space	Metal	Valve	Silver	Crawl Space	Good	0.00	
49	Crawl Space	Metal	Breaker Box	Grey	Crawl Space	Good	0.06	
50	Crawl Space	Metal	Pipe	Red	Crawl Space	Good	0.02	
51	Crawl Space	Clay	Block	Red	Crawl Space	Good	0.00	
52	D-17	Ceramic	Tile	Cream	D-17	Good	0.00	
53	D-17	Metal	Cabinet	Beige	D-17	Good	0.00	
54	D-17	Metal	Upper Cabinet	Beige	D-17	Good	0.02	

55	D-17	Metal	Door Frame	Beige	D-17	Good	0.02	
56	D-17	Ceramic	Floor	Beige	D-17	Good	0.00	
57	D-17	Metal	Cabinet	Beige	D-17	Good	0.00	
58	D-17	Metal	Pipe	Black	D-17	Good	0.00	
59	Hallway	Sheetrock	Wall	White	Hallway	Good	0.00	
60	Hallway	Metal	Grate	White	Hallway	Good	0.00	
61	Hallway	Metal	Grid	White	Hallway	Good	0.00	
62	D-18	Metal	Door Frame	Beige	D-18	Good	0.00	
63	D-22	Metal	Door Frame	Beige	D-22	Good	0.00	
64	Hallway	Metal	Pipe	Black	Hallway	Fair	0.00	
65	D-21	Sheetrock	Wall	Cream	D-21	Fair	0.00	
66	Hallway	Sheetrock	Wall	Cream	Hallway	Fair	0.00	
67	D-27	Metal	Door Frame	Beige	D-27	Good	0.00	
68	D-27	Metal	Cabinet	Beige	D-27	Good	0.00	
69	D-27	Metal	Cabinet with glass	Beige	D-27	Good	0.00	
70	S. end	Metal	File Cabinet	Cream	S. end	Good	0.00	
71	S. end	Metal	Door	Cream	S. end	Good	0.00	
72	S. end	Metal	Door Frame	Cream	S. end	Good	0.05	
73	S. end	Metal	Cabinet	Beige	S. end	Good	0.00	
74	W. wall	Sheetrock	Wall	White	W. wall	Good	0.00	
75	W. wall	Metal	Fume Hood	Cream	W. wall	Good	0.01	
76	W. wall	Metal	Side of Fume Hood	Cream	W. wall	Good	0.00	
77	E. wall	Wood	Window Sill	White	E. wall	Fair	5.30	50 ft
78	W. wall	Wood	Vertical Window	White	W. wall	Good	0.00	
79	W. wall	Sheetrock	Wall	White	W. wall	Fair	0.00	
80	W. wall	Metal	Under Sink	Black	W. wall	Good	0.00	
81	W. wall	Plaster	Wall	White	W. wall	Poor	0.28	
82	W. wall	Plaster	Wall	White	W. wall	Good	0.00	
83	W. wall	Sheetrock	Column	White	W. wall	Good	0.00	

84	W. wall	Plaster	Wall	White	W. wall	Good	0.00	
85	W. wall	Metal	Power Strip	Tan	W. wall	Good	0.14	
86	D-20	Metal	Transformer	Green	D-20	Good	0.12	
87	D-20	Plaster	E Wall	White	D-20	Good	0.23	
88	D-20	Plaster	N Wall	White	D-20	Good	0.00	
89	D-20	Metal	Breaker Box	Grey	D-20	Good	0.00	
90	D-20	Wood	Panel Behind Box	Grey	D-20	Good	0.00	
91	D-20	Metal	Pipe	Red	D-20	Good	0.03	
92	D-20	Porcelain	Sink	White	D-20	Good	0.00	
93	D-20	Metal	Ceiling Light Fixture	White	D-20	Good	0.00	
94	D-20	Concrete Block	Wall	Black	D-20	Good	0.02	
95	D-20	Concrete	Floor	Grey	D-20	Good	0.00	

South Dakota
Department of Environment & Natural Resources

ASBESTOS CERTIFICATION

This is to certify that

JASON BIGGINS

has successfully completed the appropriate training in accordance with ARSD 74:31 and is certified in South Dakota as an :

✓ Inspector	Expires:	1/22/2020
✓ Management Planner	Expires:	10/31/2019
___ Abatement Designer	Expires:	
✓ Contractor/Supervisor	Expires:	1/17/2020
___ Worker	Expires:	

Certificate No. 7953

ETI ENVIRONMENTAL TRAINING INSTITUTE

UND Environmental Training Institute
4201 James Ray Drive
Grand Forks, ND 58202
(701) 757-1676

Hereby certifies that

Jason Biggins

Gary Snow & Associates
118 N Garfield
Pierre, SD 57501

Has attended and successfully completed the

Lead - Risk Assessor Refresher

In compliance with and accredited by the Environmental Protection Agency (EPA), pursuant to TSCA Sections 402/404 (15 U.S.C. 2682) and approved by the State of Minnesota under 4761.2000 to 4761.2700 and the State of North Dakota under North Dakota Air Pollution Control Rule (NDAC) 33-15-24.

Held on:
11/15/2017

Course Location:	Fargo-Expressway
Exam Date:	11/15/2017
Certificate #:	LRAR-17-001-0034 34
Expiration Date:	11/15/2018 MN 11/15/2020 EPA

TRAINING DIRECTOR
UND ENVIRONMENTAL TRAINING INSTITUTE