PRE-RENOVATION
ASBESTOS ASSESSMENT

FORMER HARDWARE
254 XENIA AVE.
YELLOW SPRINGS, OHIO 45387

Prepared For:

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NOTE: Asbestos Abatement contractors must maintain a copy of this report on site during abatement activities per OAC 3701-34-04(c)

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ERAtech Environmental, Inc. has performed this assessment in general accordance with Federal, State and Local guidelines for competent professionals conducting Pre-Renovation Asbestos Assessment Services. The statements contained in this report are true and accurate to the best of our knowledge.

Professional Services and
Report Completed By :

Douglas M. Kohnen, President
Ohio EPA Certified Asbestos Hazard Evaluation Specialist No. ES33758

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APPENDICES

1.0 EXECUTIVE SUMMARY

On behalf of Mr. Earl Reeder of Earl Reeder Associates, ERAtech Environmental, Inc. (ERAtech) has performed a Pre-Renovation Asbestos Assessment of a residential structure located at 254 Xenia Ave. in Yellow Springs, Ohio.

This Pre-Renovation Asbestos Assessment lists all suspect, presumed and confirmed asbestos containing building materials within the building destined for renovation. It is not intended for use in lieu of asbestos abatement design specifications. The purpose of this report is to identify materials within the subject structure that may contain asbestos. Although ERAtech attempted to access all areas of the structure, some hidden areas such as within the interior of walls, ceilings, unknown crawlspaces, pipe chases or tunnels may contain asbestos. If renovation or demolition activities uncover additional suspected asbestos containing materials, all activities should be stopped until the suspected materials can be sampled and appropriate measures can be taken. The renovation area includes basement space

Seven of the building materials tested were found to be EPA regulated ACM by laboratory analysis, as these materials contain greater than 1.0% asbestos in content. See Table 3.2 for Listing of ACM and estimated quantities.

The findings and conclusions stated in this report represent conditions that existed at the subject property at the time this Pre-Renovation Asbestos Assessment was performed. Additional information concerning this property that was not made available to ERAtech Environmental, Inc. or was outside of the contracted scope of services could modify the stated conclusion.

2.0 SCOPE OF SERVICES

2.1 General

ERAtech Environmental, Inc. (ERAtech) personnel performed a Pre-Renovation Asbestos Assessment of the subject structure on Thursday, December 4th, 2025. This assessment was performed in general accordance with the EPA NESHAPS and the sampling was conducted according to AHERA regulation 40 CFR 763 Subpart E.

2.2 Terms & Definitions

Asbestos – a group of minerals that are divided into two groups – serpentines and amphiboles. The distinction between groups is based upon a mineral's crystalline structure – serpentine minerals have a sheet or layered structure, amphiboles have a chain-like structure.

Chrysotile – the only asbestos mineral in the serpentine group. It is the most commonly used type of asbestos and accounts for ~95% of the asbestos found in buildings in the United States. Chrysotile is commonly known as "white asbestos" based on its natural color.

Five types of asbestos are found in the amphibole group. **Amosite**, the second most likely type to be found in buildings, is often referred to as "brown asbestos".

Crocidolite – "blue asbestos" is also an amphibole. Crocidolite was used in high temperature insulation applications. The remaining three types in the amphibole group are: **anthophyllite**, **tremolite** and **actinolite**. These varieties are of little commercial value. When found, they are usually contaminants in building materials.

Asbestos-containing materials (ACM) – material that contains more than 1.0% asbestos. This definition is used in nearly all regulations when establishing handling requirements for asbestos materials. Most regulations (EPA, States & local) apply only for ACM. However, some regulations (OSHA) have some requirements for handling materials that have some asbestos, in concentrations less than 1.0%.

Friable and Non-Friable – The U.S EPA distinguished between friable and non-friable forms of ACM. Friable ACM contains greater than 1% asbestos and can be "crumbled, pulverized, or reduced to powder by hand pressure when dry." All other things being equal, friable ACM is thought to release fibers into the air more readily; however, many types of non-friable ACM can also release fibers if disturbed.

Category I Non-Friable ACM – NESHAP classification – Asbestos-containing packing, gaskets, resilient floor covering, and asphalt roofing products, containing more than one percent (1.0 %) asbestos, that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.
Category II Non-Friable ACM – NESHAP classification – Any material, excluding Category I Non-Friable ACM, containing more than one percent (1.0 %) asbestos, that when dry, cannot be

crumbled, pulverized, or reduced to powder by hand pressure. **Non-friable asbestos**-cement products such as transite are an example.

Presumed Asbestos Containing Material – Thermal System Insulation (TSI) and surfacing material found in buildings constructed no later than 1980. "PACM" is considered to be ACM unless proven otherwise by appropriate bulk sampling and laboratory analysis.

Regulated Asbestos Containing Material (RACM) – Friable ACM or PACM Category I Non-friable ACM that has become friable or has been or will be subjected to sanding, grinding, cutting or abrading, or Category II Non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of Renovation or renovation operations.

The EPA identifies three categories of ACM used in buildings:

- **Surfacing Materials** – ACM sprayed or troweled on surfaces (walls, ceilings, structural members) for acoustical, decorative, or fireproofing purposes. This includes acoustical plaster and fireproof insulation. OSHA has further defined surfacing materials in a letter of interpretation (dated June 18, 1999) as materials with fibers "loosely bound" in the matrix.
- **Thermal System Insulation (TSI)** – Insulation used to inhibit heat transfer or prevent condensation on pipes, boilers, tanks, ducts, and various other components of hot and cold-water systems and heating, ventilation, and air conditioning (HVAC) systems. This includes pipe lagging; pipe wrap; block, batt, and blanket insulation; cements and "muds"; and a variety of other products such as gaskets and ropes.
- **Miscellaneous Materials** – Other, largely non-friable products and materials such as floor tile, ceiling tile, roofing felt, concrete pipe, outdoor siding, and fabrics.

2.3 Identification

ERAtech personnel visually assessed all accessible areas in the subject building for the presence of suspect asbestos-containing materials (ACM). Materials with the same color, texture, installation date, and system were considered homogeneous areas. The friability and material type (surfacing, thermal system insulation, miscellaneous, etc.) was determined for each homogeneous area. A listing of these materials is contained in Table 3.1. Bulk sampling locations were determined based upon: 1) Where possible, collection was conducted on a random basis with consideration for safety concerns, occupant issues and material damage, and 2) Convenience of collecting a *representative* sample of the suspected ACM. Bulk samples were collected in accordance with 40 CFR Part 763.86.

2.4 Detection

Samples collected during the assessment were placed into ZipLock™ plastic baggies, labeled, and recorded on a chain of custody and field data form. The samples were submitted to EMSL Analytical, Inc., a laboratory certified under the National Voluntary Laboratory Accreditation

Program (NVLAP) for asbestos PLM and bulk (TEM) analysis.

Each sample was analyzed for asbestos content utilizing the PLM estimation technique. The sampling results for each suspect material or homogeneous area can be found in Table 3.1. Complete laboratory chain-of-custody and laboratory documentation is supplied in Appendix A.

2.5 Assessment

Each area was evaluated and divided into functional spaces based on use and physical design. Functional spaces were determined based on the use of the space and/or the occupancy of the space. Examples of functional spaces included structures, rooms, floors, etc.

Each suspected asbestos containing homogeneous material in each functional space was assessed. The assessment included estimations of the quantity, condition and the potential for disturbance. The results of the assessment are listed in Table 3.2.

Condition Criteria

The following criteria were used to determine the condition of the homogeneous areas in each functional space:

General Damage Category	AHERA Damage Category	Criteria
Good	No damage	No damage
Fair	Damage	Up to 10% overall damage Up to 25% localized damage
Poor	Significant damage	Over 10% overall damage Over 25% localized damage

Determining the Potential for Disturbance

In addition to the current condition of the material, the potential for disturbance was determined during the assessment. Three main factors based on EPA guidelines were taken into consideration when determining the potential for disturbance. This includes: 1) potential for contact; 2) Influence of vibration; and 3) potential for air erosion. Each of these factors was ranked as high, moderate or low based on the following criteria:

Potential for Contact with the Material	
High	• Service workers work in the vicinity of the material more than once per week, or • The material is in a public area (e.g. hallway, corridor, auditorium) and is accessible to building occupants
Moderate	• Service workers work in the vicinity of the material once per month to once per week, or • The material is in a room or office and is accessible to building occupants
Low	• Service workers work in the vicinity of the material less than once per month or • The material is visible but not within reach of building occupants

Influence of Vibration	
High	• Loud motors or engines present (e.g. some fan rooms), or • Intrusive noises or easily sensed vibrations (e.g. major airport or highway)
Moderate	• Motors or engines present but not obtrusive (e.g. ducts vibrating but no fan in the area), or • Occasional loud noises (e.g. music room)
Low	• None of the above

Influence of Air Erosion	
High	• High velocity air (e.g. elevator shaft and fan room)
Moderate	• Noticeable movement of air (e.g. air shaft, ventilator air stream)
Low	• None of the above

The overall potential for disturbance was classified based on the individual evaluations for potential for contact, influence of vibration, and potential for air erosion. The individual evaluation with the greatest potential for disturbance determined the overall potential for disturbance for the homogeneous area within the functional space.

Overall Potential	
High	• Any high rating from contact, vibration or air erosion
Moderate	• No high ratings and at least one moderate rating
Low	• No high or moderate ratings

2.6 Limitations

This assessment included readily accessible areas of the subject structure and adjacent areas. Hidden wall cavities and related areas were not assessed.

This report lists suspect and confirmed asbestos containing materials. It is intended for use for determining what asbestos may need to be removed prior to renovation or Renovation activities. It is not intended for use in lieu of asbestos abatement design specifications if required.

2.7 Warranty

This assessment has been produced under an agreement between ERAtech Environmental, Inc. and Mr. Reeder. All terms and conditions of that agreement are included in this document by reference. Other than to representatives of Mr. Reeder, ERAtech Environmental, Inc. disclaims any duty to any other person with respect to the material presented in this document and no person may rely upon this document without advance and express written permission of ERAtech Environmental, Inc. and without such person agreeing to be bound by the limitations, qualifications, terms, conditions, and indemnities set forth in that agreement. The review of the property in question is subject to monetary restraints and scope limitations. Given those limitations and conditions, ERAtech Environmental, Inc. has made what, in its opinion, is a reasonable investigation, using a degree of care and skill ordinarily exercised under similar circumstances by members of this profession.

Disclosure of the contents of this report is at the discretion of Mr. Reeder. ERAtech Environmental, Inc. requires that all reproductions of this report be made in its entirety to avoid the dissemination of out-of-context information.

3.0 FINDINGS

3.1 Materials Containing Asbestos

Similar materials that were suspected of containing asbestos were grouped into homogeneous sampling areas (HA's). An HA contains materials that are uniform in texture, color, date of application, use or system, and appears identical in every other aspect. The HA was identified for the purpose of sampling and determining asbestos content. Table 3.1 includes the Sample Identification, HA description, location, friable/non-friable (Yes/No) designation, and material category. HA materials found to contain > 1.0 % asbestos (which are regulated by the EPA and OSHA) are listed below in ***BOLD and ITALICIZED*** type.

Table 3.1 Suspect Asbestos by Homogeneous Material Summary Listing

Sample #	Material Description	Room/Location	HA#	Floor	Friable
AS-1	**Linoleum (Cracked Marble Pattern) Tan on lower wall**	**Large Room**	**A**	**1**	**No**
AS-2	Linoleum (Cracked Marble Pattern) Tan on lower wall	Large Room	A	1	No
AS-3	Linoleum Behind Counter on Floor Behind Counter	Large Room	B	1	No
AS-4	Linoleum Behind Counter on Floor Behind Counter	Large Room	B	1	No
AS-5	**9" x 9" Floor Tile - Tan w/ White Fleck**	**Large Room**	**C**	**1**	**No**
AS-6	9" x 9" Floor Tile - Tan w/ White Fleck	Large Room	C	1	No
AS-7	**Plaster - Wall**	**Large Room**	**D**	**1**	**No**
AS-8	Plaster - Wall	Large Room	D	1	No
AS-9	Plaster - Wall	Large Room	D	1	No
AS-10	~18" x 18" Ceiling Tile	Large Room	E	1	No
AS-11	~18" x 18" Ceiling Tile	Large Room	E	1	No
AS-12	Floor leveler	Sink in Room	F	1	No
AS-13	**9" x 9" Floor Tile - Tan w/ White Fleck**	**Sink in Room**	**G**	**1**	**No**
AS-14	9" x 9" Floor Tile - Tan w/ White Fleck	Sink in Room	G	1	No
AS-15	**9" x 9" Floor Tile - Red**	**Sink in Room**	**H**	**1**	**No**
AS-16	9" x 9" Floor Tile - Red	Sink in Room	H	1	No
AS-17	**Sheet of Fireproofing Board**	**Back Room**	**I**	**1**	**No**
AS-18	Sheet of Fireproofing Board	Back Room	I	1	No
AS-19	Stair Tread on Stairway	Stairway	J	1to2	No
AS-20	Stair Tread on Stairway	Stairway	J	1to2	No
AS-21	12" x 12' Floor Tile - Beige & Tan	Near Safe	K	2	No
AS-22	12" x 12' Floor Tile - Beige & Tan	Near Safe	K	2	No
AS-23	12" x 12" Floor Tile - Red & Black	Large Room	L	2	No
AS-24	12" x 12" Floor Tile - Red & Black	Large Room	L	2	No
AS-25	Plaster - Wall	Stairway	M	2to3	No

AS-26	Plaster - Wall	Large Room	M	3	No
AS-27	Plaster - Ceiling	Stairway	N	2to3	No
AS-28	Plaster - Ceiling	Large Room	N	3	No
AS-29	12" x 12" Floor Tile - Beige & Tan	Large Room	O	B	No
AS-30	12" x 12" Floor Tile - Beige & Tan	Large Room	O	B	No
AS-31	**9" x 9" Floor Tile - Tan**	**Large Room**	**P**	**B**	**No**
AS-32	9" x 9" Floor Tile - Tan	Large Room	P	B	No
AS-33	12" x 12" Ceiling Tile	Large Room	Q	B	No
AS-34	12" x 12" Ceiling Tile	Large Room	Q	B	No
AS-35	Pegboard - Brown	Large Room	R	B	No
AS-36	Pegboard - Brown	Large Room	R	B	No

3.2 Locations of Asbestos Containing Materials

Seven of the building materials tested were found to be EPA regulated ACM by laboratory analysis, as these materials contain greater than 1.0% asbestos in content. See Table below for listing of ACM and estimated quantities.

Table 3.2

HA	HA Description	Room/Location Description	Est. Quantity*	Condition	Friable	Asbestos Detected	Accessible	Disturbance Potential
A	Tan Sheet Vinyl Flooring AS-1	1st Floor – Large Room	TBD	Fair	N	15% Chrysotile	Yes	Medium
C	9” x 9” Tan Floor Tile AS-5	1st Floor – Large Room	>2000 LF	Fair	N	2% Chrysotile	Yes	Medium
D	Off-White Texture AS-7	1st Floor – Large Room	TBD	Fair	N	2% Chrysotile	Yes	Medium
G	9” x 9” Tan Floor Tile AS-13	1st Floor - Room with Sink	TBD	Fair	N	2 % Chrysotile	Yes	Low
H	9” x 9” Red Floor Tile AS-15	1st Floor – Room with Sink	TBD	Fair	N	2 % Chrysotile	Yes	Low
I	Fireproofing AS-17	1st Floor – Back Room	~32 SF	Fair	N	60% Chrysotile	Yes	Medium
P	9” x 9” Tan Floor Tile AS-31	Basement - Large Room	~14 SF	Fair	N	3% Chrysotile	Yes	Low

Please note that Property Owner/Operators are required to mail or hand deliver at least ten working days before Renovation or renovation begins, the Ohio EPA Notification of Renovation and Renovation form (except in the case of emergency Renovations and emergency renovations.

APPENDIX A
CHAIN-OF-CUSTODY & LABORATORY DOCUMENTATION