



Asbestos & Lead Based Paint Assessment

City of Spartanburg
107 Amelia Street
Spartanburg, South Carolina 29303

Prepared for:

The City of Spartanburg
440 South Church St., Suite B
Spartanburg, South Carolina 29306

Prepared by:

Apex Environmental Management, Inc.
7 Winchester Court
Mauldin, South Carolina 29662

Project Number: 0123-01

February 9, 2023





Apex Project Number 0123

February 9, 2023

Mr. Lynn Coggins
City of Spartanburg
440 South Church Street, Suite B
Spartanburg, SC 29306

Reference: Asbestos and Lead-Based Paint Assessment Services
107 Amelia Street
Spartanburg, South Carolina 29303

Dear Mr. Coggins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property.

This report and the associated attachments summarize our evaluation of the conditions observed at the project site. The findings presented by Apex are based upon sampling performed in the subject building. There is a chance that undetected ACM may exist in the building between walls or in other areas that would only be exposed during demolition or structural renovations. Should material be discovered that could potentially contain asbestos during the demolition process, additional samples of the material should be collected by a licensed asbestos inspector and submitted to an accredited laboratory for analytical interpretation. Our recommendations are based on the guidelines presented in EPA and/or OSHA regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for abatement. Quantities are estimates and contractors must verify amounts prior to bidding or removal. If you are planning an abatement project, please contact Apex to discuss the requirements. Use of this document without the express written consent of Apex is at the sole risk of the user and or/abatement contractor.

The conclusions and/or recommendations contained in this report are based on our understanding of the applicable standards at the time this report was prepared. No warranty, expressed or implied, is made. If you have any questions please feel free to contact us at (864) 404-3210.

Respectfully submitted,
APEX ENVIRONMENTAL MANAGEMENT, INC.

Tom Oliver
Vice President

Appendices

7 Winchester Court
Mauldin, SC 29662
864.404.3210 office
864.404.3213 fax

802 E. Martintown Rd.
Suite 208
N. Augusta, SC 29841
803.440.2790 office

www.apex-ehs.com

SERVICES

Indoor Air Quality

Mold Remediation

Asbestos & Lead

Industrial Hygiene

Worker Health &
Safety

Mold Consulting

Moisture
Management
Plans

Safety
Assessment

Environmental Site
Assessments

Hazard
Communication

ASBESTOS AND LEAD BASED PAINT ASSESSMENT

**CITY OF SPARTANBURG
107 AMELIA STREET
SPARTANBURG, SOUTH CAROLINA 29303**

APEX PROJECT NO. 0123-01

TABLE OF CONTENTS

SECTION

- I Asbestos & Lead Evaluation Report
- II Asbestos & LBP Data Tables
- III Laboratory Analytical Results & Chain of Custody
- IV Photographic Log
- V SC DHEC Asbestos Inspector License

SECTION I

Asbestos & Lead Evaluation Report

ASBESTOS EVALUATION REPORT APEX PROJECT NUMBER: 0123-01
--

Date:	2/29/2023	Page Number:	1 of 4
Client:	City of Spartanburg	Client Contact:	Mr. Lynn Coggins
Client Address:	440 South Church Street Suite B Spartanburg, SC 29306	Client Phone Number:	(864) 580-5323
Project:	Asbestos Evaluation and Lead Based Paint Assessment		
Property Address:	107 Amelia Street Spartanburg, SC 29303		
Assessor:	Tom Oliver	Date of Assessment:	1/24/2023
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number:	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 120 years
Building Type:	Residential	Number of Stories:	1
Foundation:	Brick Crawlspace	Approximate Square Footage	1,025 SF

EXTERIOR BUILDING MATERIALS

- Pitched wooden roof with shingles & felt.
- Vinyl siding over transite & felt paper with wooden siding beneath.
- Vinyl windows with caulk on the metal wrapping over the casings/frames.
- Wooden doors with no caulk.
- A-Tape on the HVAC system in the crawlspace.
- Chimney tar on 2 chimney's – assumed to be ACM.
- Exterior wooden barn with a metal roof with no sealant/tar. No Suspect ACM observed.

INTERIOR BUILDING MATERIALS

- Drywall with joint compound ceilings with plaster & finish located above.
- Plaster with finish walls with unfinished drywall beneath scattered throughout.
- Carpet over wooden floors.
- Wooden floors with felt paper throughout.
- Ceramic tiles in the bathroom.

SCOPE OF THE SURVEY

The objectives of the asbestos and lead assessment included the following:

- Identification of suspect asbestos-containing material (ACM) and lead based paints (LBP) in readily observable locations. Limited demolition of building finishes was conducted.
- Asbestos survey with sample collection by a South Carolina accredited inspector.
- Suspect ACM analysis by polarized light microscopy (PLM) utilizing EMSL Analytical, Inc. (EMSL) as an NVLAP certified laboratory, their accreditation number is 200841-0.
- Transmission electron microscopy (TEM) analysis of non-friable organically bound materials suspected to contain asbestos and testing negatively by PLM analysis.
- Lead inspection by a lead inspector certified by the Environmental Protection Agency and licensed to conduct LBP surveys in South Carolina.
- In situ analysis of suspected lead based paints by X-ray fluorescence (XRF).
- Presenting the results in a report identifying confirmed ACMs and LBPs.

METHODS

Asbestos Containing Materials

In order to determine if the suspect materials observed during the visual survey contained asbestos, representative bulk samples were collected and placed in sealed packages. Thirty-one (31) bulk samples were collected during the survey and submitted to EMSL in Pineville, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). EMSL participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Their NVLAP accreditation number is 200841-0. EPA regulations require that multiple samples of each homogeneous material be collected for laboratory analysis. Thirty-six (36) samples were analyzed due to layering by PLM and positive stop methods. In accordance with South Carolina Regulation 61-86.1, non-friable organically bound materials that are reported to be non-asbestos containing by PLM analysis must also be analyzed by Transmission Electron Microscopy (TEM). Five (5) samples were analyzed using TEM.

Lead-Based Paint

Lead painted surfaces were analyzed in place using X-ray fluorescence. Painted surfaces were selected based on color of topcoat, underlying layers and substrate on which it was painted.

RESULTS

Asbestos Results

The EPA defines an asbestos-containing material (ACM) as a material containing more than 1% asbestos. OSHA defines ACM as a material containing detectable amounts of asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. A specific *PLM and TEM Data Table* is located in Appendix II of this report and identifies positive materials and designates approximate quantities.

Suspect asbestos containing materials that were identified to be asbestos containing include:

- Approximately 1,750 SF of transite siding beneath the vinyl siding & under the back door.
- Approximately 50 LF of cloth HVAC A-Tape on the crawlspace.
- Approximately 12 LF of tar on 2 chimney's – assumed positive.

Lead Based Paint

OSHA does not recognize a threshold level of lead for definition purposes, only the presence or absence of lead. The current OSHA regulations recognize an airborne action level of thirty micrograms per cubic meter (30 µg/m³) during an eight-hour workday and a permissible exposure level of fifty micrograms per cubic meter (50 µg/m³) for employees.

Currently South Carolina Department of Health and Environmental Control (SC DHEC) defines XRF readings on substrates equal to or in excess of 0.7 mg/cm² to be LBP. Readings equal to or in excess of 1.0 mg/cm² via XRF is considered to be LBP by the EPA and HUD. XRF readings below these LBP thresholds are considered to have lead-containing substrates. The *XRF LBP Data Tables* are located in Appendix I at the conclusion of the report.

Several surfaces in the building tested positive for lead in excess of the SC DHEC regulatory definition of LBP:

Exterior:

- White front porch columns wrapped in metal.
- White front door casing wrapped in metal.
- White wooden front door jamb.
- White wooden siding beneath vinyl & transite siding.
- Gray concrete stairs to the back door.

Interior:

- Black stone fireplace & floor.

RECOMMENDATIONS AND DISCUSSION

Asbestos Containing Materials

If the above referenced asbestos materials are to be disturbed by renovations or demolition, the asbestos must be removed in accordance with EPA, State of South Carolina and OSHA asbestos regulations. The State of South Carolina, Department of Health and Environmental Control (DHEC) has specific regulations that must be adhered to during asbestos removal/abatement projects.

APEX recommends the following:

1. Abate the asbestos containing materials from the residence prior to renovation or demolition.
2. No suspect ACM was identified at the exterior wooden barn during the assessment. Therefore, no recommendations are warranted at this time.

3. Follow applicable asbestos regulations during renovation or demolition of the structure. You should be aware that stringent requirements are imposed upon anyone renovating or demolishing a structure in which ACM will be disturbed. This work must be performed in accordance with OSHA asbestos regulations, 29 CFR 1910 & 1926, and NESHAP asbestos regulations 40 CFR 61, subpart M. South Carolina regulations require the accreditation of personnel who work in the asbestos field and notification and permitting fees for asbestos removal projects. There is a 10 working day notification period required prior to abatement of asbestos in a facility. Failure to take proper precautions and actions to protect human health and the environment can result in penalties, danger to personnel, and construction delays.

Lead-Based Paint

Changes to state and federal regulations have changed the disposal options for LBP waste and LBP residue. LBP waste is defined as material such as wood, brick, metal, etc. that is coated with LBP. LBP residue is defined as residue that is generated from the removal (scraped, chipped, sandblasted, chemical means, etc.) of LBP from a structure. The regulations allow LBP waste from residential and commercial structures to be disposed of in Class 2 (construction and demolition debris) and Class 3 (municipal solid waste or industrial) landfills in South Carolina. The management of LBP residue is based on the source and lead concentration characterized by Toxic Characteristic Leaching Procedures (TCLP) to determine if the waste is classified as hazardous or non-hazardous. LBP residues that have TCLP sample results less than 5 milligrams per liter (mg/L) lead may be disposed of in a Class 3 landfill and is considered to be non-hazardous. LBP residues that have TCLP sample results equal to or greater than 5 mg/L lead should be disposed of in a Subtitle C landfill and is considered to be hazardous. However, the landfills should be contacted to determine their specific disposal requirements.

Occupational Safety and Health Administration Lead Regulations apply to actions initiated on lead containing materials. This regulation applies to lead concentrations greater than the analytical limit of detection. This regulation sets exposure levels on airborne lead and does not reference the percent lead in paint. Therefore, initial personal air monitoring should be conducted on workers performing work on surfaces which have a lead concentration of 0.1 mg/cm² or above to satisfy the OSHA requirements. If a baseline exposure lower than the OSHA Action Level of 30 micrograms per cubic meter (mg/m³) is established, personal air monitoring may be terminated. The full OSHA lead standard should be referenced for compliance.

A copy of this report must be submitted to SCDHEC at least ten (10) working days prior to demolition when applying for a demolition permit.

SECTION II

Asbestos & LBP Data Tables

**ASBESTOS SURVEY FIELD DATA SHEET
PLM & TEM ANALYSIS**

Project Name: COS 107 Amelia Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 107 Amelia Street, Spartanburg, SC 29303

Project Manager: Tom Oliver

Project Number: 0123-01

Date: 1/24/2023

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Roof	Roof shingles (1 layer) & felt paper (1 layer)	PLM - NAD	Non-friable	Good	1,600 SF
2						
3			TEM - NAD			
4	Vinyl window casings	Caulk on metal wrapping	PLM - NAD	Non-friable	Good	12 EA
5						
6			TEM - NAD			
7	Beneath vinyl siding & under back door	Transite siding	20% chrysotile	Non-friable	Good	1,750 SF
8						
9						
10	Beneath vinyl siding	Felt paper under transite siding	PLM - NAD	Non-friable	Good	1,750 SF
11						
12			TEM - NAD			
13	Crawlspace HVAC	Cloth A-Tape	50% chrysotile	Friable	Good	50 LF
14						
15						
16	Throughout ceilings	Drywall with joint compound	PLM - NAD	Friable	Good	1,025 SF
17						
18						
19						
20						
21	Throughout walls & above drywall ceilings	Plaster with finish	PLM - NAD	Friable	Good	2,600 SF
22						
23						
24						
25						

**ASBESTOS SURVEY FIELD DATA SHEET
PLM & TEM ANALYSIS**

Project Name: COS 107 Amelia Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 107 Amelia Street, Spartanburg, SC 29303

Project Manager: Tom Oliver

Project Number: 0123-01

Date: 1/24/2023

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
26	Scattered throughout walls beneath plaster	Unfinished drywall	PLM - NAD	Friable	Good	1,000 SF
27						
28						
29	Throughout under wooden floors	Felt paper	PLM - NAD	Non-friable	Good	1,025 SF
30			TEM - NAD			
31						
Assumed	2 Chimneys	Chimney tar	Assumed	Non-friable	Good	12 LF

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Bold = Positive For Asbestos

SF = Square Feet

Chry = Chrysotile

**FIELD DATA SHEET
XRF LBP ANALYSIS**

Project Name: COS 107 Amelia Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 107 Amelia Street, Spartanburg, SC 29303

Project Manager: Tom Oliver

Project Number: 0123-01

Date: 1/24/2023

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/cm ²)
1	Standardization				184.00/PASS
2	Calibration				1.23
3	Calibration				1.23
4	Calibration				1.15
5	Exterior front porch	Bottom porch skirt	Gray	Wood	0.00
6	Exterior front porch	Column	White	FFM	0.50
7	Exterior front porch	Header boards	White	FFM	>5.00
8	Exterior front porch	Front door casing	White	FFM	3.33
9	Exterior front porch	Front door	Brown	Wood	0.00
10	Exterior front porch	Front door jamb	White	Wood	2.82
11	Exterior front porch	Window shutter	Brown	Vinyl	0.00
12	Exterior front porch	Porch ceiling	White	FFV	0.00
13	Exterior front porch	Roof trim	White	FFM	0.00
14	Exterior	Siding	White	Wood	1.40
15	Exterior	Siding	White	Vinyl over Transite	0.00
16	Exterior	Window	White	Metal	0.00
17	Exterior	Window casing	White	Wood	0.12
18	Exterior	Window sill	White	FFM	0.55
19	Exterior	Soffit/fascia	White	FFM	0.00
20	Exterior	Foundation	Red	Brick	0.00
21	Exterior	Handrail	Brown	Metal	0.10
22	Exterior	Back door	Brown	Wood	0.00
23	Exterior	Back door threshold	White	Wood	0.00
24	Exterior	Crawlspace door	White	Wood	0.00
25	Exterior	Crawlspace door frame	White	Wood	0.00
26	Exterior	Stairs	Gray	Concrete	1.11
27	Interior	Fireplace mantle	White	Wood	0.19

**FIELD DATA SHEET
XRF LBP ANALYSIS**

Project Name: COS 107 Amelia Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 107 Amelia Street, Spartanburg, SC 29303

Project Manager: Tom Oliver

Project Number: 0123-01

Date: 1/24/2023

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/cm2)
28	Interior	Fireplace surround	White	Wood	0.16
29	Interior	Fireplace	Black	Stone	>5.00
30	Interior	Fireplace floor	Black	Stone	>5.00
31	Interior	Front door	White	Wood	0.00
32	Interior	Front door casing	White	Wood	0.00
33	Interior	Crown molding	White	Wood	0.00
34	Interior	Base board	White	Wood	0.09
35	Interior	Window	White	Wood	0.00
36	Interior	Window casing	White	Wood	0.10
37	Interior	Window sill	White	Wood	0.09
38	Interior	Window apron	White	Wood	0.23
39	Interior	Wall	Tan	Plaster	0.17
40	Interior	Door with window panes	White	Wood	0.08
41	Interior	Ceiling	White	Drywall	0.00
42	Interior	Cabinets	White	Wood	0.05
43	Interior	Counter - top	White	Wood	0.00
44	Interior	Floor	Brown	Wood	0.01
45	Interior	Ceiling	Silver	Plaster	0.00
46	Interior	Door	White	Wood	0.12
47	Interior	Fireplace mantle	White	Wood	0.12
48	Interior	Fireplace surround	White	Wood	0.13
49		Calibration			1.20
50		Calibration			1.26
51		Calibration			1.16

Bold = LBP NA = Insufficient Testing Time Performed

FFM = Factory Finished Metal

VFC = Vinyl Floor Covering

FFV = Factory Finished Vinyl

SECTION III

Laboratory Analytical Results & Chain of Custody



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412301015

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Tom Oliver
Apex Environmental Management
7 Winchester Court
Mauldin, SC 29662

Phone: (864) 640-5127

Fax:

Received Date: 01/25/2023 9:30 AM

Analysis Date: 01/30/2023

Collected Date: 01/24/2023

Project: 0123-01 COS 107 Amelia St ACM/LBP (City of Spartanburg)

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-Shingle <small>412301015-0001</small>	Roof Shingles (1 Layer) & Felt (1 Layer)	Gray/Black Fibrous Homogeneous	15% Glass	5% Quartz 80% Non-fibrous (Other)	None Detected
1-Felt <small>412301015-0001A</small>	Roof Shingles (1 Layer) & Felt (1 Layer)	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
2-Shingle <small>412301015-0002</small>	Roof Shingles (1 Layer) & Felt (1 Layer)	Black Fibrous Homogeneous	10% Glass	5% Quartz 15% Ca Carbonate 70% Non-fibrous (Other)	None Detected
2-Felt <small>412301015-0002A</small>	Roof Shingles (1 Layer) & Felt (1 Layer)	Black Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4 <small>412301015-0003</small>	Caulk on Metal Wrapping - Windows	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5 <small>412301015-0004</small>	Caulk on Metal Wrapping - Windows	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
7 <small>412301015-0005</small>	Transite Siding	Gray/Green Fibrous Homogeneous		80% Non-fibrous (Other)	20% Chrysotile
8 <small>412301015-0006</small>	Transite Siding				Positive Stop (Not Analyzed)
9 <small>412301015-0007</small>	Transite Siding				Positive Stop (Not Analyzed)
10 <small>412301015-0008</small>	Felt under Transite Siding	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
11 <small>412301015-0009</small>	Felt under Transite Siding	Black Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
13 <small>412301015-0010</small>	HVAC A-Tape	Gray/White Fibrous Homogeneous		50% Non-fibrous (Other)	50% Chrysotile
14 <small>412301015-0011</small>	HVAC A-Tape				Positive Stop (Not Analyzed)
15 <small>412301015-0012</small>	HVAC A-Tape				Positive Stop (Not Analyzed)
16-Joint Compound <small>412301015-0013</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
16-Drywall <small>412301015-0013A</small>	Drywall & Joint Compound	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

Initial report from: 01/30/2023 16:23:44



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412301015
Customer ID: AXEM25
Customer PO:
Project ID: City of Spartanburg

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
17-Joint Compound <small>412301015-0014</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
17-Drywall <small>412301015-0014A</small>	Drywall & Joint Compound	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
18-Joint Compound <small>412301015-0015</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
18-Drywall <small>412301015-0015A</small>	Drywall & Joint Compound	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
19-Joint Compound <small>412301015-0016</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
19-Drywall <small>412301015-0016A</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
20-Tape <small>412301015-0017</small>	Drywall & Joint Compound	Beige Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
20-Joint Compound <small>412301015-0017A</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
20-Drywall <small>412301015-0017B</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
21-White Coat <small>412301015-0018</small>	Plaster w/ Finish	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
21-Gray Coat <small>412301015-0018A</small>	Plaster w/ Finish	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
22-White Coat <small>412301015-0019</small>	Plaster w/ Finish	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
22-Gray Coat <small>412301015-0019A</small>	Plaster w/ Finish	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
23-White Coat <small>412301015-0020</small>	Plaster w/ Finish	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
23-Gray Coat <small>412301015-0020A</small>	Plaster w/ Finish	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
24-White Coat <small>412301015-0021</small>	Plaster w/ Finish	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
24-Gray Coat <small>412301015-0021A</small>	Plaster w/ Finish	Gray Non-Fibrous Homogeneous	<1% Cellulose	25% Quartz 75% Non-fibrous (Other)	None Detected
25-White Coat <small>412301015-0022</small>	Plaster w/ Finish	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
25-Gray Coat <small>412301015-0022A</small>	Plaster w/ Finish	Gray Non-Fibrous Homogeneous	<1% Cellulose	25% Quartz 75% Non-fibrous (Other)	None Detected

Initial report from: 01/30/2023 16:23:44



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412301015
Customer ID: AXEM25
Customer PO:
Project ID: City of Spartanburg

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
26 <i>412301015-0023</i>	Unfinished Drywall	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
27 <i>412301015-0024</i>	Unfinished Drywall	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
28 <i>412301015-0025</i>	Unfinished Drywall	White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
29 <i>412301015-0026</i>	Felt Paper	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
30 <i>412301015-0027</i>	Felt Paper	Black Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected

Analyst(s)

Brant Alyea (21)

Maggie Pasour (15)

Lee Plumley, Laboratory Manager
or Other Approved Signatory

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

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 01/30/2023 16:23:44



EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / charlottelab@emsl.com

EMSL Order: 412301015
Customer ID: AXEM25
Customer PO:
Project ID: City of Spartanburg

Attention: Tom Oliver
 Apex Environmental Management
 7 Winchester Court
 Mauldin, SC 29662

Phone: (864) 640-5127
Fax:
Received Date: 01/25/2023 9:30 AM
Analysis Date: 02/03/2023
Collected Date: 01/24/2023

Project: 0123-01 COS 107 Amelia St ACM/LBP (City of Spartanburg)

Test Report: Asbestos Analysis of Non-Friable Organically Bound Materials by TEM via EPA/600/R-93/116 Section 2.5.5.1

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
3-Shingle 412301015-0028	Roof Shingles (1 Layer) & Felt (1 Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-Felt 412301015-0029	Roof Shingles (1 Layer) & Felt (1 Layer)	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6 412301015-0030	Caulk on Metal Wrapping - Windows	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
12 412301015-0031	Felt under Transite Siding	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
31 412301015-0032	Felt Paper	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Sarah Breneman (5)

Lee Plumley, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 02/03/2023 14:41:33



EMSL Order Number / Lab Use Only

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

412301015

Customer Information	Customer ID:	Billing ID:
	Company Name: Apex Environmental Management	Company Name: Apex Environmental Management
	Contact Name: Tom Oliver	Billing Contact: Rebecca Shultz
	Street Address: 7 Winchester Court	Street Address: 7 Winchester Court
	City, State, Zip: Mauldin SC 29662 Country: US	City, State, Zip: Mauldin SC Country: US
	Phone: 864-640-5127	Phone: 864-640-5127
Email(s) for Report: tolover@apex-ehs.com	Email(s) for Invoice: rshultz@apex-ehs.com	

Project Information

Project Name/No: 0123-01 COS 107 Amelia St ACM/LBP

EMSL LIMS Project ID: (If applicable, EMSL will provide)

US State where samples collected: SC

State of Connecticut (CT) must select project location:
 Commercial (Taxable) Residential (Non-Taxable)

Sampled By Name: Tom Oliver

Sampled By Signature: *[Signature]*

Date Sampled: 1/24/2023

No. of Samples in Shipment: 31

Turn-Around-Time (TAT)

3 Hour 6 Hour 24 Hour 32 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

Please call ahead for large projects and/or turnaround times 6 Hours or Less. *32 Hour TAT available for select tests only; samples must be submitted by 11.30am.

Test Selection

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)
 PLM EPA NOB (<1%)
 POINT COUNT
 400 (<0.25%) 1,000 (<0.1%)
 POINT COUNT w/ GRAVIMETRIC
 400 (<0.25%) 1,000 (<0.1%)
 NIOSH 9002 (<1%)
 NYS 198.1 (Friable - NY)
 NYS 198.6 NOB (Non-Friable - NY)
 NYS 198.8 (Vermiculite SM-V)

TEM - Bulk

TEM EPA NOB
 NYS NOB 198.4 (Non-Friable - NY)
 TEM EPA 600/R-93/116 w Milling Prep (0.1%)

Other Tests (please specify)

Positive Stop - Clearly Identified Homogeneous Areas (HA)

Sample Number	HA Number	Sample Location	Material Description
1	PLM	Roof shingles (1 layer) ↓	
2	↓	felt (1 layer)	
3	TEM		
4	PLM	Caulk on metal wrapping -	
5	↓	windows siding ↓	
6	TEM		
7	PLM	Transite siding	
8	↓		
9	↓		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

City of Spartanburg

Method of Shipment: Fed Ex Standard Overnight	Sample Condition Upon Receipt:
Relinquished by: <i>[Signature]</i>	Received by: <i>[Signature]</i>
Date/Time: 1/24/23 5:15 PM	Date/Time: 1/25/23
Relinquished by: <i>[Signature]</i>	Received by: FR 7965 6365 8543
Date/Time:	Date/Time: 9:30 AM

Controlled Document - Asbestos Bulk R7 9/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



Asbestos Bulk Building Materials - Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.
10801 Southern Loop Blvd

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

1015

Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: charlottelab@EMSL.com

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

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Sample Number	HA Number	Sample Location	Material Description
10	PLM	Felt under transite	
11	L	siding	
12	TEM		
13	PLM	HVAC A-Tape	
14	↓		
15	↓		
16	PLM	Drywall & Joint	
17	↓	Compound	
18	↓		
19	↓		
20	↓		
21	PLM	Plaster w/ finish	
22	↓		
23	↓		
24	↓		
25	↓		
26	PLM	Unfinished drywall	
27	↓		
28	↓		
29	PLM	Felt paper	
30	↓		
31	TEM		

Method of Shipment:		Sample Condition Upon Receipt:	
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:

Controlled Document - Asbestos Bulk R7 09/14/2021

AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

SECTION IV
Photographic Log



Photo 1 – 107 Amelia Street located in Spartanburg, South Carolina 29303



Photo 2 – Roof shingles (1 layer) & felt paper (1 layer)



Photo 3 – View of 2 chimney's with tar – assumed positive



Photo 4 – View of 1 of 2 chimney's with tar – assumed positive



Photo 5 – Caulk on metal wrapping over window casings/frames



Photo 6 – Transite with felt below the vinyl siding



Photo 7 – HVAC A-Tape in the crawlspace



Photo 8 – Drywall with joint compound ceilings with plaster & finish located above



Photo 9 – Plaster with finish walls throughout



Photo 10 – Unfinished drywall scattered throughout beneath the plaster walls



Photo 11 – Felt paper under wooden floor throughout

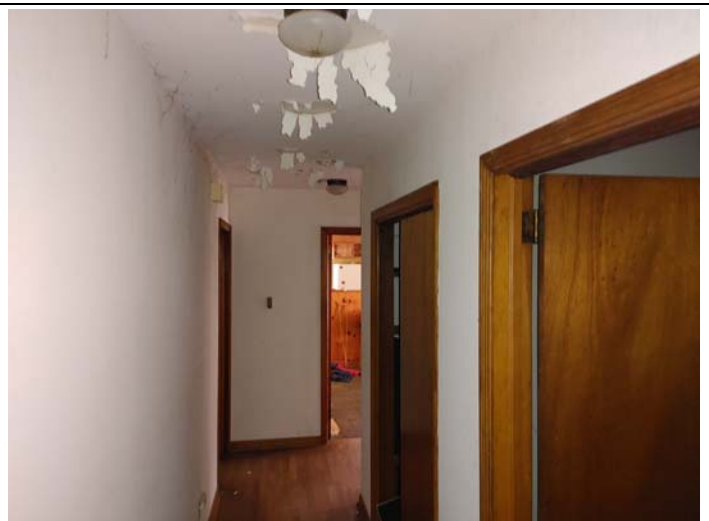


Photo 12 – Typical view of the house interior

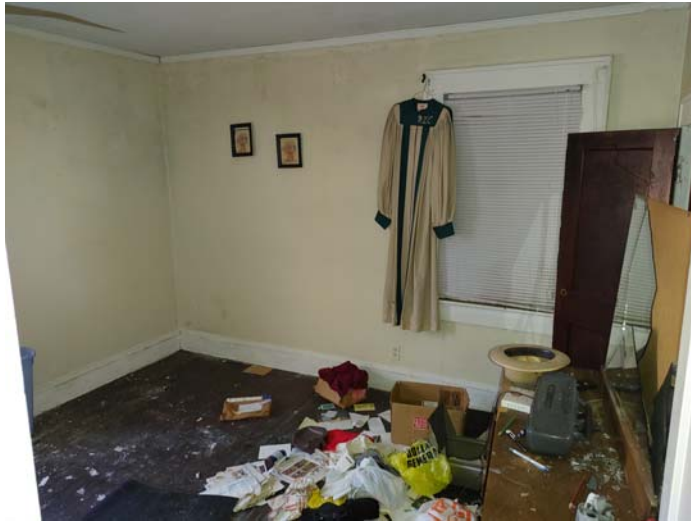


Photo 13 – Typical view of the house interior



Photo 14 – Typical view of the house interior



Photo 15 – Typical view of the house interior



Photo 16 – Typical view of the house interior



Photo 17 – Transite under back door



Photo 18 – View of the exterior barn with no suspect ACM identified



Photo 19 – View of the interior of the barn with no suspect ACM identified



Photo 20 – View of the interior of the barn with no suspect ACM identified

SECTION V

SC DHEC Asbestos Inspector License

SCDHEC ISSUED
Asbestos ID Card

Thomas H Oliver



AIRSAMPLER AS-00202
CONSULTBI BI-00680

Expiration Date:
08/04/23
12/01/23

This card is nontransferable and considered invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB.

For information of corrections contact: SCDHEC - Asbestos Section
2600 Bull Street
Columbia, SC 29201
(803) 898-4289