



## **Asbestos & Lead Based Paint Assessment**

City of Spartanburg  
558 Hugh Street  
Spartanburg, South Carolina 29301

### ***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: 0519-118

July 22, 2019





Apex Project Number 0519-118

July 22, 2019

Mr. Jeff Tillerson  
City of Spartanburg  
440 South Church Street, Suite B  
Spartanburg, SC 29306

Reference: Asbestos and Lead-Based Paint Assessment Services  
558 Hugh Street  
Spartanburg, South Carolina 29301

Dear Mr. Tillerson:

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.**

A handwritten signature in blue ink, appearing to read 'Tom Oliver', is written over a horizontal line.

Tom Oliver  
Director of Operations

Appendices

7 Winchester Court  
Mauldin, SC 29662  
864.404.3210 office  
864.404.3213 fax

802 E. Martintown Rd  
N. Augusta, SC 29841  
803.440-2790 office

[www.apex-ehs.com](http://www.apex-ehs.com)

## SERVICES

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**ASBESTOS AND LEAD BASED PAINT ASSESSMENT**

**CITY OF SPARTANBURG  
558 HUGH STREET  
SPARTANBURG, SOUTH CAROLINA 29301**

**APEX PROJECT NO. 0519-118**

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**SECTION I**

**Asbestos & Lead Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0519-118**

Date:	7/22/2019	Page Number:	1 of 4
Client:	City of Spartanburg	Client Contact:	Mr. Jeff Tillerson
Client Address:	440 South Church Street Suite B Spartanburg, SC 29306	Client Phone Number:	(864) 596-2911
Project:	Asbestos Evaluation and Lead Based Paint Assessment		
Property Address:	558 Hugh Street Spartanburg, SC 29301		
Assessor:	Tom Oliver	Date of Assessment:	7/4/2019
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number:	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 110 years
Building Type:	Residential	Number of Stories:	2
Foundation:	Brick Crawlspace	Approximate Square Footage:	1,750 SF

**EXTERIOR BUILDING MATERIALS**

- Pitched wooden framed roof shingles & felt.
- Metal siding over wooden clapboard siding.
- Wooden windows with glazing.
- Gray caulk on the metal coverings over the window casings.
- White caulk on the wooden window casings with no metal coverings.
- Vinyl windows with no caulk.
- A portion of the window casings are not wrapped with metal and do not have caulk.
- Wooden doors with no caulk.
- 2 chimneys with tar – assumed positive.

**INTERIOR BUILDING MATERIALS**

- Drywall with joint compound & tape throughout.
- Plaster with no finish throughout the 1<sup>st</sup> floor.
- Popcorn ceiling texture throughout the 1<sup>st</sup> floor except in the 1<sup>st</sup> floor bathroom.
- Swirl pattern ceiling texture in the 2<sup>nd</sup> floor front bedroom.
- Multiple types of vinyl flooring with & without mastics.
- Vinyl floor exists under wood.
- Carpet over wooden floors.
- Mastic behind bathtub surround in the bathroom.
- Large amounts of house hold items & debris throughout house.

## **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. Fifty-one (51) bulk samples were collected during the survey and submitted to EMSL Analytical, Inc. (EMSL) in Charlotte, 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 and are split into homogeneous layers and each layer is analyzed separately. Sixty-one (61) samples were analyzed due to layering by PLM method and positive stop methods. In accordance with SC DHEC 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). Sixteen (16) 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 5 windows with gray caulk on the metal wrapping on the casings.
- Approximately 12 LF of tar on 2 chimneys – 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 ( $30 \mu\text{g}/\text{m}^3$ ) during an eight-hour workday and a permissible exposure level of fifty micrograms per cubic meter ( $50 \mu\text{g}/\text{m}^3$ ) for employees.

Currently, the EPA defines LBP as paint containing in excess of, or equal to,  $1.0 \text{ mg}/\text{cm}^2$ . The laboratory analytical results are included in the LBP Analysis Report in Appendix II of this report. The approximate locations of the paint samples collected and analytical results are presented in the *LBP Data Table* included in Appendix II of this report.

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

#### Exterior:

- White wooden door frames
- White wooden windows & window frames
- White wooden columns, ceiling & header boards on the front porch
- White wooden siding

#### Interior:

- White wooden door frames & window frames
- Green bead board walls
- White porcelain toilet
- White metal bath tub

## **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 in the structure prior to renovation or demolition.
2. 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

Currently the EPA defines LBP as paint containing greater than 1.0 milligrams per square centimeter ( $\text{mg}/\text{cm}^2$ ) lead or in excess of, or equal to, 0.5 percent lead. Building materials identified as being painted with LBP should be segregated from the other building materials and recycled or disposed of in a municipal lined landfill.

Changes to SC DHEC 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 ( $\text{mg}/\text{L}$ ) 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  $\text{mg}/\text{L}$  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  $\text{mg}/\text{cm}^2$  or above to satisfy the OSHA requirements. If a baseline exposure lower than the OSHA Action Level of 30 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) 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 558 Hugh Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 558 Hugh Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0519-118

Date: 7/4/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Roof	Roof shingles (2 layers) & felt (1 layer)	PLM - NAD	Non-Friable	Good	2,250 SF
2			TEM - NAD			
3						
4	Wooden windows	Window glazing	PLM - NAD	Non-Friable	Good	8 EA
5			TEM - NAD			
6						
7	<b>Metal window wrapped casings</b>	<b>Window casing caulk - gray</b>	<b>5% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>5 EA</b>
8						
9						
10	Wooden window casings	Window casing caulk - white	PLM - NAD	Non-Friable	Good	2 EA
11			TEM - NAD			
12						
13	Throughout 1st floor except in bathroom	Popcorn ceiling texture	PLM - NAD	Friable	Good	1,250 SF
14						
15						
16						
17						
18	2nd floor front bedroom	Swirl pattern ceiling texture	PLM - NAD	Friable	Good	150 SF
19						
20						
21	Throughout 1st floor ceilings; 1st floor back hallway & bathroom walls & ceilings; 2nd floor front bedroom ceiling	Drywall with joint compound & tape	PLM - NAD	Friable	Good	1,700 SF
22						
23						
24						
25						

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

Project Name: COS 558 Hugh Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 558 Hugh Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0519-118

Date: 7/4/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
26	Throughout 1st floor	Plaster with no finish	PLM - NAD	Friable	Good	2,000 SF
27						
28						
29						
30						
31	Bathroom	Mastic beneath bathtub surround	PLM - NAD	Non-Friable	Good	35 SF
32			TEM - NAD			
33						
34	Front hallway	Yellow medium square pattern vinyl floor & mastic	PLM - NAD	Non-Friable	Damaged	205 SF
35			TEM - NAD			
36						
37	Front hallway under wood	Black vinyl floor & mastic	PLM - NAD	Non-Friable	Good	205 SF
38			TEM - NAD			
39						
40	Back hallway	Yellow square & floral pattern vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	75 SF
41			TEM - NAD			
42						
43	Bathroom	Tan square pattern vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	20 SF
44			TEM - NAD			
45						
46	Kitchen	Brown wooden pattern vinyl floor & mastic	PLM - NAD	Non-Friable	Good	150 SF
47			TEM - NAD			
48						

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

Project Name: COS 558 Hugh Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 558 Hugh Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0519-118

Date: 7/4/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49	Kitchen pantry	Beige square pattern vinyl floor & mastic	PLM - NAD	Non-Friable	Good	25 SF
50			TEM - NAD			
51						
<b>Assumed</b>	<b>Chimneys</b>	<b>2 Chimneys with tar</b>	<b>Assumed</b>	<b>Non-Friable</b>	<b>Good</b>	<b>12 LF</b>

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

FT3 = Cubic Feet

# FIELD DATA SHEET XRF LBP ANALYSIS

Project Name: COS 558 Hugh Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 558 Hugh Street Spartanburg, SC 29301

Project Manager: Tom Oliver

Project Number: 0519-118

Date: 7/4/2019

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m <sup>3</sup> )
1	Calibration				1.15
2	Calibration				1.13
3	Calibration				1.08
<b>4</b>	<b>Exterior front porch</b>	<b>Door frame</b>	<b>White</b>	<b>Wood</b>	<b>3.80</b>
5	Exterior front porch	Door	White	Wood	0.00
<b>6</b>	<b>Exterior front porch</b>	<b>Window frame</b>	<b>White</b>	<b>Wood</b>	<b>4.72</b>
<b>7</b>	<b>Exterior front porch</b>	<b>Window</b>	<b>White</b>	<b>Wood</b>	<b>5.00</b>
8	Exterior front porch	Handrail	Green	Wood	0.00
9	Exterior front porch	Baluster	Green	Wood	0.00
<b>10</b>	<b>Exterior front porch</b>	<b>Column</b>	<b>White</b>	<b>Wood</b>	<b>4.66</b>
11	Exterior front porch	Column	Green	Brick	0.04
<b>12</b>	<b>Exterior front porch</b>	<b>Ceiling</b>	<b>White</b>	<b>Wood</b>	<b>5.00</b>
<b>13</b>	<b>Exterior front porch</b>	<b>Header board</b>	<b>White</b>	<b>Wood</b>	<b>2.52</b>
<b>14</b>	<b>Exterior</b>	<b>Siding</b>	<b>White</b>	<b>Wood</b>	<b>4.24</b>
15	Exterior	Foundation	Green	CMU block	0.05
16	Exterior	Foundation	Green	Brick	0.03
17	Exterior	Door	White	Metal	0.00
18	Standardization				184.00
19	Calibration				1.21
20	Calibration				1.12
21	Calibration				1.18
22	Interior	Door	Tan	Wood	0.60
23	Interior	Door frame	Tan	Wood	0.06
24	Interior	Stairs	Tan	Wood	0.16
25	Interior	Fireplace mantle	Tan	Wood	0.05

# FIELD DATA SHEET XRF LBP ANALYSIS

Project Name: COS 558 Hugh Street ACM/LBP

Sampled By: Tom Oliver

Project Location: 558 Hugh Street Spartanburg, SC 29301

Project Manager: Tom Oliver

Project Number: 0519-118

Date: 7/4/2019

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m <sup>3</sup> )
26	Interior	Fireplace mantle	Green	Wood	0.05
27	Interior	Fireplace	Red	Brick	0.00
28	Interior	Base board	Tan	Wood	0.12
29	Interior	Ceiling	White	Drywall	0.00
30	Interior	Window	Tan	Wood	0.06
31	Interior	Window frame	Tan	Wood	0.10
32	Interior	Door	Tan	Wood	0.08
33	Interior	Wall	Tan	Bead board	0.03
34	Interior	Wall	White	Drywall	0.00
35	Interior	Door	White	Metal	0.00
<b>36</b>	<b>Interior</b>	<b>Door frame</b>	<b>White</b>	<b>Wood</b>	<b>5.00</b>
<b>37</b>	<b>Interior</b>	<b>Window frame</b>	<b>White</b>	<b>Wood</b>	<b>2.94</b>
<b>38</b>	<b>Interior</b>	<b>Wall</b>	<b>Green</b>	<b>Bead board</b>	<b>2.51</b>
39	Interior	Pantry shelves	Green	Wood	0.45
40	Interior	Cabinets	Green	Wood	0.00
<b>41</b>	<b>Interior</b>	<b>Toilet</b>	<b>White</b>	<b>Porcelain</b>	<b>1.00</b>
<b>42</b>	<b>Interior</b>	<b>Bath tub</b>	<b>White</b>	<b>Metal</b>	<b>5.00</b>
43	Interior	Sink	White	Composite	0.00
44	Interior	Sink vanity	White	Wood	0.00
45	Interior	Wall	White	Plaster	0.00
46	Calibration				1.09
47	Calibration				1.04
48	Calibration				1.20

**Bold = LBP**

FFM = Factory Finish Metal

FFM = Factory Finish 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](mailto:charlottelab@emsl.com)

EMSL Order: 411906850

Customer ID: AXEM25

Customer PO:

Project ID:

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

**Phone:** (864) 640-5274

**Fax:**

**Received Date:** 07/09/2019 9:20 AM

**Analysis Date:** 07/12/2019 - 07/15/2019

**Collected Date:** 07/05/2019

**Project:** 0519-118 COS-558 Hugh St

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-Shingle 1 <small>411906850-0001</small>	Roof Shingles (2 Layers) & Felt (1) Layer	White/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
1-Shingle 2 <small>411906850-0001A</small>	Roof Shingles (2 Layers) & Felt (1) Layer	Brown/Gray/Black Fibrous Homogeneous	1% Cellulose 5% Glass	94% Non-fibrous (Other)	None Detected
1-Felt <small>411906850-0001B</small>	Roof Shingles (2 Layers) & Felt (1) Layer	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
2-Shingle 1 <small>411906850-0002</small>	Roof Shingles (2 Layers) & Felt (1) Layer	White/Black Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
2-Shingle 2 <small>411906850-0002A</small>	Roof Shingles (2 Layers) & Felt (1) Layer	Brown/Gray/Black Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
2-Felt <small>411906850-0002B</small>	Roof Shingles (2 Layers) & Felt (1) Layer	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
4 <small>411906850-0003</small>	Window Glazing	Brown/Gray Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5 <small>411906850-0004</small>	Window Glazing	Brown/Gray Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
7 <small>411906850-0005</small>	Window Casing Caulk-Grey	Gray/Tan Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 85% Non-fibrous (Other)	5% Chrysotile
8 <small>411906850-0006</small>	Window Casing Caulk-Grey				Positive Stop (Not Analyzed)
10 <small>411906850-0007</small>	Window Casing Caulk-White	Gray/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
11 <small>411906850-0008</small>	Window Casing Caulk-White	Gray/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
13 <small>411906850-0009</small>	Popcorn Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
14 <small>411906850-0010</small>	Popcorn Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
15 <small>411906850-0011</small>	Popcorn Ceiling Texture	Beige Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
16 <small>411906850-0012</small>	Popcorn Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected

Initial report from: 07/15/2019 09:05:57





# 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](mailto:charlottelab@emsl.com)

**EMSL Order:** 411906850  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
17 411906850-0013	Popcorn Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
18 411906850-0014	Swirl Patter Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
19 411906850-0015	Swirl Patter Ceiling Texture	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
20 411906850-0016	Swirl Patter Ceiling Texture	Gray/White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
21-Drywall 411906850-0017	Drywall w/ Joint Compound & Tape	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
21-Joint Compound 411906850-0017A	Drywall w/ Joint Compound & Tape	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
21-Tape 411906850-0017B	Drywall w/ Joint Compound & Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
22-Drywall 411906850-0018	Drywall w/ Joint Compound & Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
22-Joint Compound 411906850-0018A	Drywall w/ Joint Compound & Tape	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
22-Tape 411906850-0018B	Drywall w/ Joint Compound & Tape	Beige Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
23-Drywall 411906850-0019	Drywall w/ Joint Compound & Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
23-Joint Compound 411906850-0019A	Drywall w/ Joint Compound & Tape	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
23-Tape 411906850-0019B	Drywall w/ Joint Compound & Tape	Beige Fibrous Homogeneous	100% Cellulose		None Detected
24-Drywall 411906850-0020	Drywall w/ Joint Compound & Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
24-Joint Compound 411906850-0020A	Drywall w/ Joint Compound & Tape	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
24-Tape 411906850-0020B	Drywall w/ Joint Compound & Tape	Beige Fibrous Homogeneous	100% Cellulose		None Detected
25-Drywall 411906850-0021	Drywall w/ Joint Compound & Tape	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
25-Joint Compound 411906850-0021A	Drywall w/ Joint Compound & Tape	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
25-Tape 411906850-0021B	Drywall w/ Joint Compound & Tape	Beige Fibrous Homogeneous	100% Cellulose		None Detected

Initial report from: 07/15/2019 09:05:57



# 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](mailto:charlottelab@emsl.com)

**EMSL Order:** 411906850  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
26 411906850-0022	Plaster w/ no Finish	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose <1% Hair	35% Quartz 65% Non-fibrous (Other)	None Detected
27 411906850-0023	Plaster w/ no Finish	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose <1% Hair	35% Quartz 65% Non-fibrous (Other)	None Detected
28 411906850-0024	Plaster w/ no Finish	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose <1% Hair	35% Quartz 65% Non-fibrous (Other)	None Detected
29 411906850-0025	Plaster w/ no Finish	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose <1% Hair	35% Quartz 65% Non-fibrous (Other)	None Detected
30 411906850-0026	Plaster w/ no Finish	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose <1% Hair	40% Quartz 60% Non-fibrous (Other)	None Detected
31 411906850-0027	Mastic Behind Bathtub Surround	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
32 411906850-0028	Mastic Behind Bathtub Surround	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
34-Flooring 411906850-0029	Yellow Medium Square Vinyl Floor & Mastic	Tan Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
34-Mastic 411906850-0029A	Yellow Medium Square Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
35-Flooring 411906850-0030	Yellow Medium Square Vinyl Floor & Mastic	Tan/Beige Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
35-Mastic 411906850-0030A	Yellow Medium Square Vinyl Floor & Mastic	Yellow Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
37-Flooring 411906850-0031	Black Vinyl Floor & Mastic	Brown/Black Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
37-Mastic 411906850-0031A	Black Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-Flooring 411906850-0032	Black Vinyl Floor & Mastic	Brown/Black/Orange Non-Fibrous Heterogeneous	40% Cellulose <1% Synthetic	60% Non-fibrous (Other)	None Detected
38-Mastic 411906850-0032A	Black Vinyl Floor & Mastic	Brown/Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
40-Flooring 411906850-0033 No mastic present	Yellow Square & Floral Pattern Vinyl Floor & Mastic	Tan/Beige Fibrous Heterogeneous	20% Cellulose 1% Glass	79% Non-fibrous (Other)	None Detected
41-Flooring 411906850-0034 No Mastic Present.	Yellow Square & Floral Pattern Vinyl Floor & Mastic	Gray/Tan/White Fibrous Heterogeneous	25% Cellulose 1% Glass	74% Non-fibrous (Other)	None Detected
43 411906850-0035	Tan Square Pattern Vinyl Floor w/ no Mastic	Tan/Beige Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected

Initial report from: 07/15/2019 09:05:57



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**EMSL Order:** 411906850  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
44 411906850-0036	Tan Square Pattern Vinyl Floor w/ no Mastic	Gray/Tan Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
46-Flooring 411906850-0037	Brown Wooden Pattern Vinyl Floor & Mastic	Brown/Gray/Tan Fibrous Heterogeneous	20% Cellulose 1% Glass	79% Non-fibrous (Other)	None Detected
46-Mastic 411906850-0037A	Brown Wooden Pattern Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
47-Flooring 411906850-0038	Brown Wooden Pattern Vinyl Floor & Mastic	Brown/Gray Fibrous Heterogeneous	25% Cellulose 1% Glass	74% Non-fibrous (Other)	None Detected
47-Mastic 411906850-0038A	Brown Wooden Pattern Vinyl Floor & Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
49-Flooring 411906850-0039	Beige Square Vinyl Floor & Mastic	Tan/Beige Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
49-Mastic 411906850-0039A	Beige Square Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
50-Flooring 411906850-0040	Beige Square Vinyl Floor & Mastic	Tan/Beige/Gold Fibrous Heterogeneous	30% Cellulose 1% Glass	69% Non-fibrous (Other)	None Detected
50-Mastic 411906850-0040A	Beige Square Vinyl Floor & Mastic	Yellow Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected

Analyst(s) \_\_\_\_\_

Nicole Shutts (31)

Scott Combs (30)

Lee Plumley, Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. 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 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. Interpretation and use of test results are the responsibility of the client. All samples received in acceptable condition unless otherwise noted. 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. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 07/15/2019 09:05:57



# 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](mailto:charlottelab@emsl.com)

EMSL Order: 411906850

Customer ID: AXEM25

Customer PO:

Project ID:

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

**Phone:** (864) 640-5274

**Fax:**

**Received Date:** 07/09/2019 9:20 AM

**Analysis Date:** 07/17/2019

**Collected Date:** 07/05/2019

**Project:** 0519-118 COS-558 Hugh St

## 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 1 411906850-0041	Roof Shingles (2 Layers) & Felt (1) Layer	Gray/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
3-Shingle 2 411906850-0042	Roof Shingles (2 Layers) & Felt (1) Layer	Gray/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
3-Felt 411906850-0043	Roof Shingles (2 Layers) & Felt (1) Layer	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6 411906850-0044	Window Glazing	White/Beige Non-Fibrous Heterogeneous	100.0 Other	<0.1 Fibrous_Other	No Asbestos Detected
12 411906850-0045	Window Casing Caulk-White	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
33 411906850-0046	Mastic Behind Bathtub Surround	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
36-Flooring 411906850-0047	Yellow Medium Square Vinyl Floor & Mastic	Tan Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
36-Mastic 411906850-0048	Yellow Medium Square Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
39-Flooring 411906850-0049	Black Vinyl Floor & Mastic	Gray/Tan/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
39-Mastic 411906850-0050	Black Vinyl Floor & Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
42-Flooring 411906850-0051	Yellow Square & Floral Pattern Vinyl Floor & Mastic	Tan/Beige Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
			No Mastic Present.		
45 411906850-0052	Tan Square Pattern Vinyl Floor w/ no Mastic	Tan Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 07/17/2019 14:15:04



# 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](mailto:charlottelab@emsl.com)

EMSL Order: 411906850

Customer ID: AXEM25

Customer PO:

Project ID:

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

**Phone:** (864) 640-5274

**Fax:**

**Received Date:** 07/09/2019 9:20 AM

**Analysis Date:** 07/17/2019

**Collected Date:** 07/05/2019

**Project:** 0519-118 COS-558 Hugh St

## 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
48-Flooring 411906850-0053	Brown Wooden Pattern Vinyl Floor & Mastic	Brown/Tan/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
48-Mastic 411906850-0054	Brown Wooden Pattern Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
51-Flooring 411906850-0055	Beige Square Vinyl Floor & Mastic	Tan/Beige Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
51-Mastic 411906850-0056	Beige Square Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Scott Combs (16)

Lee Plumley, Laboratory Manager  
or other approved signatory

This laboratory is not responsible for % asbestos in total sample when the residue only is submitted for analysis. The above report relates only to the items tested. This report may not be reproduced, except in full, without written approval by EMSL Analytical, Inc. Samples received in good condition unless otherwise noted. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample.

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 07/17/2019 14:15:04





EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411906850

Pineville, NC 28134  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management, Inc.		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Tom Oliver		Telephone #: 864-404-3210	
Email Address: tolover@apex-ehs.com		Fax #: 864-404-3213	Purchase Order:
Project Name/Number: 0519-118 COS 150 Bona Avenue		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

**Turnaround Time (TAT) Options\* - Please Check**

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

\*For TEM Air 3 hr through 6 hr, please call ahead to schedule. \*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.

<p><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%) <b>96 Hour TAT</b></p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p> <p><input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)</p> <p><input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> OSHA ID-191 Modified</p> <p><input type="checkbox"/> Standard Addition Method</p>	<p><b>TEM - Bulk</b></p> <p><input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 <b>1 week TAT</b></p> <p><input type="checkbox"/> NY ELAP Method 198.4 (TEM)</p> <p><input type="checkbox"/> Chatfield Protocol (semi-quantitative)</p> <p><input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep Technique</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique</p> <p style="text-align: center;"><u>Other</u></p> <p><input type="checkbox"/></p>
--	---

Check For Positive Stop - Clearly Identify Homogenous Group      Date Sampled: **7-4-19**

Samplers Name: Tom Oliver      Samplers Signature:

Sample #	HA #	Sample Location	Material Description
1		Roof shingles (2 layers) 2	PLM
2		felt (1) layer 1	↓
3		↓	TEM
4		Window glazings	PLM
5		↓	↓
6		↓	TEM
7		Window casing caulk - gray	PLM
8		↓	↓
9		↓	TEM

Client Sample # (s): <b>1-51</b>	Total # of Samples: <b>51</b>
Relinquished (Client):	Date: <b>7-5-19</b> Time: <b>5:30</b>
Received (Lab):	Date: <b>7/9/19</b> Time: <b>9:20AM SLK</b>
Comments/Special Instructions: <small>Positive stop on all analysis. Please bill according to special pricing for City of Spartanburg. Ask Jason McDonald for details.</small>	
<b>7957 4064 3880</b>	



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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

Pineville, NC 28134  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
10		Window casing caulk - white	PLM
11		↓	↓
12		↓	TEM
13		Popcorn ceiling texture	PLM
14		↓	↓
15		↓	↓
16		↓	↓
17		↓	↓
18		Swirl pattern ceiling texture	PLM
19		↓	↓
20		↓	↓
21		Drywall w/ joint compound	PLM
22		& tape	↓
23		↓	↓
24		↓	↓
25		↓	↓
26		Plaster w/ no finish	PLM
27		↓	↓
28		↓	↓
29		↓	↓
30		↓	↓
31		Mastic behind bathtub	PLM
32		surround	↓
33		↓	TEM

**\*Comments/Special Instructions:**

Positive stop on all analysis. Please bill according to special pricing for City of Spartanburg. Ask Jason McDonald for details.





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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

Pineville, NC 28134  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
34		Yellow medium square	PLM
35		Vinyl floor + mastic	↓
36			TEM
37		Black vinyl floor + mastic	PLM
38			↓
39			TEM
40		Yellow square + floral pattern	PLM
41		Vinyl floor + mastic	↓
42			TEM
43		Tan square pattern vinyl floor	PLM
44		w/ no mastic	↓
45			TEM
46		Brown wooden pattern	PLM
47		vinyl floor + mastic	↓
48			TEM
49		Beige square vinyl floor	PLM
50		+ mastic	↓
51			TEM

**\*Comments/Special Instructions:**

Positive stop on all analysis. Please bill according to special pricing for City of Spartanburg. Ask Jason McDonald for details.



**SECTION IV**  
**Photographic Log**



Photo 1 – 558 Hugh Street in Spartanburg, South Carolina



Photo 2 – Roof shingles & felt



Photo 3 – Chimney with tar – assumed positive



Photo 4 – Chimney with tar – assumed positive



Photo 5 – White caulk on wooden window casing with no metal wrapping



Photo 6 – Wooden window glazing





Photo 7 – Gray caulk on the metal wrapping over window casings



Photo 8 – Swirl ceiling texture in the 2<sup>nd</sup> floor front bedroom



Photo 9 – Popcorn ceiling texture throughout 1<sup>st</sup> floor except in bathroom



Photo 10 – Plaster with no finish throughout the 1<sup>st</sup> floor



Photo 11 – Plaster with no finish throughout the 1<sup>st</sup> floor



Photo 12 – Drywall with joint compound & tape throughout 1<sup>st</sup> floor ceilings; 1<sup>st</sup> floor back hallway & bathroom walls & ceilings; 2<sup>nd</sup> floor front bedroom ceiling





Photo 13 – Drywall with joint compound & tape throughout 1st floor ceilings; 1st floor back hallway & bathroom walls & ceilings; 2nd floor front bedroom ceiling



Photo 14 – Mastic beneath bathtub surround in the bathroom



Photo 15 – Yellow medium square pattern vinyl floor & mastic in the front hallway



Photo 16 – Black vinyl floor & mastic in the front hallway under wood



Photo 17 – Yellow square & floral pattern vinyl floor with no mastic in the back hallway



Photo 18 – Tan square pattern vinyl floor with no mastic in the bathroom





Photo 19 – Brown wooden pattern vinyl floor & mastic in the kitchen



Photo 20 – Beige square pattern vinyl floor & mastic in the kitchen pantry



Photo 21 – Typical view of large amounts of household items & debris



Photo 22 – Typical view of large amounts of household items & debris



Photo 23 – Typical view of large amounts of household items & debris



Photo 24 – View of damage to roof & ceiling

**SECTION V**

**SC DHEC Asbestos Inspector License**

## SCDHEC ISSUED

### Asbestos ID Card

Thomas H Oliver



CONSULTBI BI-00680  
AIRSAMPLER AS-00202

Expiration Date:

01/18/20

05/08/20

This card is nontransferable and shall be 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