



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

City of Spartanburg  
190 North Thompson 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: 0521-99

October 29, 2021





**Apex Project Number 0521-99**

October 29, 2021

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

Reference: Asbestos and Lead-Based Paint Assessment Services  
190 North Thompson 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.**

Stephanie Hamby  
Project Manager

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

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**ASBESTOS AND LEAD BASED PAINT ASSESSMENT**

**CITY OF SPARTANBURG  
190 NORTH THOMPSON STREET  
SPARTANBURG, SOUTH CAROLINA 29301**

**APEX PROJECT NO. 0521-99**

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**SECTION I**

**Asbestos & Lead Evaluation Report**

<b>ASBESTOS EVALUATION REPORT</b> <b>APEX PROJECT NUMBER: 0521-99</b>
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Date:	10/29/2021	Page Number:	1 of 3
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:	190 North Thompson Street Spartanburg, SC 29301		
Assessor:	Stephanie Hamby	Date of Assessment:	9/8 & 9/27/2021
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number:	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 70 years
Building Type:	Residential quadplex	Number of Stories:	1
Foundation:	Cement slab	Approximate Square Footage	3,600 SF

**EXTERIOR BUILDING MATERIALS**

- Gable roof with one layer of shingle and felt.
- Exterior insulated finishing system (EIFS) on the exterior walls.
- Vinyl windows with no caulk.
- Exterior caulk on some door casings.
- Wooden door with no caulk.
- No chimney penetrations.

**INTERIOR BUILDING MATERIALS**

- Drywall with joint compound walls and ceiling sporadic throughout.
- Household debris and items throughout all units.
- Two types of vinyl flooring with mastic sporadic.
- Carpet and ceramic tile over concrete floor sporadic.
- Textured ceiling located in unit 2.
- Wall texture located in unit 4.

## **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. Forty-eight (48) 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. Sixty-two (62) 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). Eight (8) 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. The *Asbestos PLM & TEM Data Table* is provided in Appendix II of this report.

No asbestos was detected in the samples collected during the assessment and analyzed by the laboratory. The building was fully assessed; however, if additional ACM is discovered during demolition activities, Apex recommends that work activities stop until the suspect building materials may be sampled and analyzed.

### 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, EPA defines LBP as paint containing in excess of, or equal to,  $1.0 \text{ mg}/\text{cm}^2$ . *XRF LBP Data Sheets* providing XRF results for testing combinations can be found in the Appendices at the conclusion of this report. Paint-chip sampling was not required for XRF inconclusive values.

No surfaces were identified in the building that tested in excess of the regulatory definition of LBP.

## **RECOMMENDATIONS AND DISCUSSION**

### Asbestos Containing Materials

No ACM was identified during the assessment; therefore, no recommendations are warranted at this time.

### 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  $0.1 \text{ mg}/\text{cm}^2$  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 190 North Thompson Street ACM-LBP

Sampled By: T. Shultz & S. Hamby

Project Location: 190 North Thompson Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0521-99

Date: 9/8/2021

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Roof - front half	1 layer of shingles, 1 layer of felt	PLM - NAD	Non-Friable	Good	4,500 SF
2			TEM - NAD			
3						
4	Roof - rear half	1 layer of shingles, 1 layer of felt	PLM - NAD	Non-Friable	Good	
5			TEM - NAD			
6						
7	Exterior walls entire building	Exterior Insulation Finishing System (EIFS)	PLM - NAD	Friable	Good	21,000 SF
8						
9						
10						
11						
12						
13						
14	Exterior door	White door caulk	PLM - NAD	Non-Friable	Good	8 EA
15			TEM - NAD			
16						
17	Walls and ceilings sporadic throughout	Drywall and joint compound	PLM - NAD	Friable	Good	700 SF
18						
19						
20						
21						
22						
23						

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

Project Name: COS 190 North Thompson Street ACM-LBP

Sampled By: T. Shultz & S. Hamby

Project Location: 190 North Thompson Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0521-99

Date: 9/8/2021

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	Unit 2, kitchen and hall	Swirl ceiling texture	PLM - NAD	Friable	Good	85 SF
25						
26						
27	Unit 2, bedrooms & den	Popcorn ceiling texture	PLM - NAD	Friable	Good	325 SF
28						
29						
30						
31	Attic between units	Unfinished drywall	PLM - NAD	Friable	Good	60 SF
32						
33						
34						
35						
36	Unit 4 bedroom walls	Plaster with texture	PLM - NAD	Friable	Good	800 SF
37						
38						
39	Unit 1 den & unit 4 kitchen and hallway	Green marble self-stick 12"x12" floor tile	PLM - NAD	Non-Friable	Good	200 SF
40			TEM - NAD			
41						
42	Unit 1 bedroom	Wood pattern roll vinyl flooring with no adhesive	PLM - NAD	Non-Friable	Good	150 SF
43			TEM - NAD			
44						
45						

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

Project Name: COS 190 North Thompson Street ACM-LBP

Sampled By: T. Shultz & S. Hamby

Project Location: 190 North Thompson Street, Spartanburg, South Carolina 29301

Project Manager: Tom Oliver

Project Number: 0521-99

Date: 9/8/2021

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
46	Unit 4 laundry room wall	Hard white caulk	PLM - NAD	Non-Friable	Good	50 LF
47			TEM - NAD			
48						

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 190 North Thompson Street ACM-LBP

Sampled By: Stephanie Hamby

Project Location: 190 North Thompson Street, Spartanburg, SC 29301

Project Manager: Tom Oliver

Project Number: 0521-99

Date: 9/27/2021

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m <sup>3</sup> )
42	Unit A - Bedroom	Wall	Purple	Drywall	0.00
43		Door Frame	White	Wood	0.00
44		Window Frame	White	Wood	0.00
45		Window Sill	White	Wood	0.00
46		Baseboard	White	Wood	0.00
47		Wall	Purple	CMU Block	0.00
48		Wall	Gray	CMU Block	0.00
49		Wall	Gray	Drywall	0.00
50		Unit A - Den	Door	White	Metal
51	Door Frame		White	Wood	0.00
52	Wall		Tan	Drywall	0.00
53	Wall		Yellow	CMU Block	0.00
54	Hall	Door Frame - Wide	White	Wood	0.00
55	Unit A - Bedroom	Wall	Tan	CMU Block	0.00
56	Unit A - Hall	Ceiling	White	Drywall	0.00
57	Unit B - Den	Wall	Tan	Drywall	0.00
58		Door	White	Metal	0.00
59		Door Frame	White	Wood	0.00
60		Baseboard	White	Wood	0.00
61		Chimney (old)	Tan	Brick	0.53
62	Unit B - Hall	Ceiling	White	Wood	0.00
63	Unit B - Bedroom	Wall	Green	Drywall	0.00
64		Wall	Green	CMU Block	0.00
65		Door	White	Wood	0.00
66	Unit B - Kitchen	Cabinet	White	Wood	0.00

## FIELD DATA SHEET XRF LBP ANALYSIS

Project Name: COS 190 North Thompson Street ACM-LBP

Sampled By: Stephanie Hamby

Project Location: 190 North Thompson Street, Spartanburg, SC 29301

Project Manager: Tom Oliver

Project Number: 0521-99

Date: 9/27/2021

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m <sup>3</sup> )
67	Unit C - Bath	Wall	White	CMU Block	0.43
68	Unit C - Hall	Door Frame	White	Wood	0.07
69	Unit C - Bedroom	Wall	Orange	CMU Block	0.00
70	Unit C - Bath	Cabinet	White	Wood	0.00
71	Unit C - Den	Door	White	Metal	0.00
72	Unit C - Den	Chimney (old)	White	Brick	0.00
73	Unit D - Bedroom	Wall	Gray	Plaster	0.00
74		Window Frame	White	Wood	0.00
75	Unit D - Den	Wall	Blue	Wood	0.00
76		Chimney (old)	Black	Brick	0.00
77		Door	White	Metal	0.00
78	Exterior	Wall	Brown	Stucco	0.00
79		Trim	Tan	Stucco	0.00
80		Panel	Tan	Stucco	0.00
81	Calibration				1.16
82	Calibration				1.04
83	Calibration				1.07

**Bold = LBP**

FFM = Factory Finished Metal

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](mailto:charlottelab@emsl.com)

EMSL Order: 412108153

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

**Attention:** Stephanie Hamby  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

**Phone:** (864) 918-1433

**Fax:**

**Received Date:** 09/09/2021 9:45 AM

**Analysis Date:** 09/15/2021 - 09/16/2021

**Collected Date:**

**Project:** 0521-99 COS 190 N. Thompson St. (City of Spartanburg)

## 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 <small>412108153-0001</small>	Roof - Front - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	8% Glass	15% Quartz 77% Non-fibrous (Other)	None Detected
1-Felt <small>412108153-0001A</small>	Roof - Front - 1 Shingle, 1 Felt	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected
2-Shingle <small>412108153-0002</small>	Roof - Front - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	10% Glass	10% Quartz 10% Ca Carbonate 70% Non-fibrous (Other)	None Detected
2-Felt <small>412108153-0002A</small>	Roof - Front - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
4-Shingle <small>412108153-0003</small>	Roof - Rear - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	5% Glass	10% Quartz 85% Non-fibrous (Other)	None Detected
4-Felt <small>412108153-0003A</small>	Roof - Rear - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
5-Shingle <small>412108153-0004</small>	Roof - Rear - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	5% Glass	10% Quartz 85% Non-fibrous (Other)	None Detected
5-Felt <small>412108153-0004A</small>	Roof - Rear - 1 Shingle, 1 Felt	Black Non-Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
7-Stucco <small>412108153-0005</small>	Exterior Walls of Bldg. - EIFS	Brown Fibrous Homogeneous	10% Glass	20% Quartz 70% Non-fibrous (Other)	None Detected
7-Concrete <small>412108153-0005A</small>	Exterior Walls of Bldg. - EIFS	Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
8-Stucco <small>412108153-0006</small>	Exterior Walls of Bldg. - EIFS	Brown/Gray Non-Fibrous Homogeneous	10% Glass	15% Quartz 75% Non-fibrous (Other)	None Detected
8-Concrete <small>412108153-0006A</small>	Exterior Walls of Bldg. - EIFS	Gray/Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
9-Stucco <small>412108153-0007</small>	Exterior Walls of Bldg. - EIFS	Brown/Gray Non-Fibrous Homogeneous	10% Glass	15% Ca Carbonate 75% Non-fibrous (Other)	None Detected
9-Concrete <small>412108153-0007A</small>	Exterior Walls of Bldg. - EIFS	Gray Non-Fibrous Homogeneous		40% Quartz 60% Non-fibrous (Other)	None Detected
10-Stucco <small>412108153-0008</small>	Exterior Walls of Bldg. - EIFS	Brown/Gray Non-Fibrous Homogeneous	5% Glass	20% Quartz 75% Non-fibrous (Other)	None Detected
10-Concrete <small>412108153-0008A</small>	Exterior Walls of Bldg. - EIFS	Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected

Initial report from: 09/16/2021 08:19:35



# 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:** 412108153  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:** City of Spartanburg

## 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
11-Stucco <i>412108153-0009</i>	Exterior Walls of Bldg. - EIFS	White Non-Fibrous Homogeneous	5% Glass	25% Quartz 70% Non-fibrous (Other)	None Detected
11-Concrete <i>412108153-0009A</i>	Exterior Walls of Bldg. - EIFS	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
12-Stucco <i>412108153-0010</i>	Exterior Walls of Bldg. - EIFS	Gray/Tan Non-Fibrous Homogeneous	5% Glass	20% Quartz 75% Non-fibrous (Other)	None Detected
12-Concrete <i>412108153-0010A</i>	Exterior Walls of Bldg. - EIFS	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
13-Stucco <i>412108153-0011</i>	Exterior Walls of Bldg. - EIFS	Gray/Tan Non-Fibrous Homogeneous	5% Glass	20% Quartz 75% Non-fibrous (Other)	None Detected
13-Concrete <i>412108153-0011A</i>	Exterior Walls of Bldg. - EIFS	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
14 <i>412108153-0012</i>	Exterior Doors - White Caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
15 <i>412108153-0013</i>	Exterior Doors - White Caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
17-Drywall <i>412108153-0014</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
17-Joint Compound <i>412108153-0014A</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
18-Drywall <i>412108153-0015</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray Non-Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
18-Joint Compound <i>412108153-0015A</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
19-Drywall <i>412108153-0016</i> <i>No joint compound present</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
20-Drywall <i>412108153-0017</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
20-Joint Compound <i>412108153-0017A</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
21-Drywall <i>412108153-0018</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray/White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
21-Joint Compound <i>412108153-0018A</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		45% Ca Carbonate 55% Non-fibrous (Other)	None Detected
22-Drywall <i>412108153-0019</i>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Gray/White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

Initial report from: 09/16/2021 08:19:35





# 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:** 412108153  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:** City of Spartanburg

## 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
22-Joint Compound <small>412108153-0019A</small>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		45% Ca Carbonate 55% Non-fibrous (Other)	None Detected
23-Drywall <small>412108153-0020</small>	Walls & Ceilings Sporadic Throughout - Drywall & JC	Brown/White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
23-Joint Compound <small>412108153-0020A</small>	Walls & Ceilings Sporadic Throughout - Drywall & JC	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
24 <small>412108153-0021</small>	Unit 2 Kitchen & Hall - Swirl Pattern Ceiling Texture (Only)	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
25 <small>412108153-0022</small>	Unit 2 Kitchen & Hall - Swirl Pattern Ceiling Texture (Only)	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
26 <small>412108153-0023</small>	Unit 2 Kitchen & Hall - Swirl Pattern Ceiling Texture (Only)	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
27 <small>412108153-0024</small>	Unit 2 Bedrooms & Den - Popcorn Pattern Ceiling Texture (Only)	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
28 <small>412108153-0025</small>	Unit 2 Bedrooms & Den - Popcorn Pattern Ceiling Texture (Only)	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
29 <small>412108153-0026</small>	Unit 2 Bedrooms & Den - Popcorn Pattern Ceiling Texture (Only)	Tan/White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
30 <small>412108153-0027</small>	Unit 2 Bedrooms & Den - Popcorn Pattern Ceiling Texture (Only)	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
31 <small>412108153-0028</small>	Unit 2 Bedrooms & Den - Popcorn Pattern Ceiling Texture (Only)	Tan/White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
32 <small>412108153-0029</small>	Attic - Between Units - Unfinished Drywall	Gray Non-Fibrous Homogeneous	12% Cellulose	88% Non-fibrous (Other)	None Detected
33 <small>412108153-0030</small>	Attic - Between Units - Unfinished Drywall	Gray Non-Fibrous Homogeneous	12% Cellulose	88% Non-fibrous (Other)	None Detected
34 <small>412108153-0031</small>	Attic - Between Units - Unfinished Drywall	Gray Non-Fibrous Homogeneous	12% Cellulose	88% Non-fibrous (Other)	None Detected
35 <small>412108153-0032</small>	Attic - Between Units - Unfinished Drywall	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
36 <small>412108153-0033</small>	Attic - Between Units - Unfinished Drywall	Brown/Gray Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
37-Light Plaster <small>412108153-0034</small>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected

Initial report from: 09/16/2021 08:19:35



# 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:** 412108153  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:** City of Spartanburg

## 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
37-Dark Plaster <i>412108153-0034A</i>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
38-Light Plaster <i>412108153-0035</i>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-Dark Plaster <i>412108153-0035A</i>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
39-Light Plaster <i>412108153-0036</i>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
39-Dark Plaster <i>412108153-0036A</i>	Unit 4 - Bedroom Walls - Plaster/Wall Texture	Gray Non-Fibrous Homogeneous		35% Quartz 65% Non-fibrous (Other)	None Detected
40 <i>412108153-0037</i>	Unit 1 Den & Unit 4 Kitchen/Hallway - Green 12x12 Marble Pattern Self Stick Tile	Green Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
41 <i>412108153-0038</i>	Unit 1 Den & Unit 4 Kitchen/Hallway - Green 12x12 Marble Pattern Self Stick Tile	Black/Green Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
43 <i>412108153-0039</i>	Unit 1 Bedroom - Wood Pattern Roll Vinyl	Tan Non-Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
44 <i>412108153-0040</i>	Unit 1 Bedroom - Wood Pattern Roll Vinyl	Gray/Tan Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
46 <i>412108153-0041</i>	Unit 4 Laundry Room - Hard Caulk	Tan Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
47 <i>412108153-0042</i>	Unit 4 Laundry Room - Hard Caulk	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

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

Brant Alyea (30)

Sarah Breneman (32)

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: 09/16/2021 08:19:35



# 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: 412108153

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

**Attention:** Stephanie Hamby  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

**Phone:** (864) 918-1433

**Fax:**

**Received Date:** 09/09/2021 9:45 AM

**Analysis Date:** 09/22/2021

**Collected Date:**

**Project:** 0521-99 COS 190 N. Thompson St. (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 412108153-0043	Roof - Front - 1 Shingle, 1 Felt	Gray/Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
3-Felt 412108153-0044	Roof - Front - 1 Shingle, 1 Felt	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6-Shingle 412108153-0045	Roof - Rear - 1 Shingle, 1 Felt	Gray/Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
6-Felt 412108153-0046	Roof - Rear - 1 Shingle, 1 Felt	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
16 412108153-0047	Exterior Doors - White Caulk	Beige Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
42 412108153-0048	Unit 1 Den & Unit 4 Kitchen/Hallway - Green 12x12 Marble Pattern Self Stick Tile	Green Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
45 412108153-0049	Unit 1 Bedroom - Wood Pattern Roll Vinyl	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
48 412108153-0050	Unit 4 Laundry Room - Hard Caulk	White/Blue Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Derrick Young (8)

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: 09/23/2021 08:36:01



EMSL Order Number / Lab Use Only

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

EMSL ANALYTICAL, INC.  
 LABORATORY PRODUCTS TRAINING

412108153

Customer Information	Customer ID:	Billing ID:
	Company Name: Apex Environmental Management	Company Name: Apex Environmental Management
	Contact Name: Stephanie Hamby	Billing Contact: Stephanie Hamby
	Street Address: 7 Winchester Court	Street Address: 7 Winchester Court
	City, State, Zip: Mauldin SC 29662 Country: US	City, State, Zip: Mauldin SC 29662 Country: US
	Phone: 864-918-1433	Phone: 864-918-1433
Email(s) for Report: shamby@apex-ehs.com		Email(s) for Invoice:

Project Information

Project Name/No: 0521-99 COS 190 N Thompson St

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: Stephanie Hamby

Sampled By Signature: *[Signature]*

No. of Samples in Shipment: 48

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		Roof - front	1 Shingle, 1 Felt
2			
3			
4		Roof - rear	1 Shingle, 1 Felt
5			
6			
7		Exterior walls of bldg	EIFS
8			
9			
10			

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

Method of Shipment: *Fedex*

Sample Condition Upon Receipt:

Relinquished by: *[Signature]* Date/Time: *9-9-21*

Received by: *[Signature]* Date/Time: *9/9/21 945AM*

Relinquished by: *[Signature]* Date/Time:

Received by: *[Signature]* Date/Time:

Controlled Document - COC-01 Asbestos Bulk R6 05/06/2021  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

8153

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
11		exterior walls of bldg	EIFS
12		├	├
13			
14		Exterior Doors	White caulk
15		├	├
16			
17		Walls & ceilings sporadic	Drywall & J.C.
18		throughout	├
19			
20			
21			
22			
23		├	├
24		Unit 2 kitchen &	Swirl pattern
25		hall	Ceiling Texture
26		├	(only) ─┬
27		Unit 2 bedrooms & den	Popcorn pattern
28			ceiling texture
29		├	(only) ─┬
30			
31		├	├
32		Attic - between units	Unfinished
33		├	dry wall
34			├
35			

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 - COC-01 Asbestos Bulk R6 05/08/2021  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 – 190 North Thompson Street in Spartanburg, South Carolina 29301



Photo 2 – Two sections of roofing material.



Photo 3 – Stucco and concrete exterior walls (EIFS).



Photo 4 – Caulk located on exterior of door trim.



Photo 5 – Drywall sporadically throughout unit walls and ceilings.



Photo 6 – Swirl ceiling texture in Unit 2, kitchen and hall.





Photo 7 – Unfinished drywall in attic.



Photo 8 – Textured walls in unit 4 bedrooms.



Photo 9 – Green marble floor tile located in unit 1 den and unit 4 hallway and kitchen.

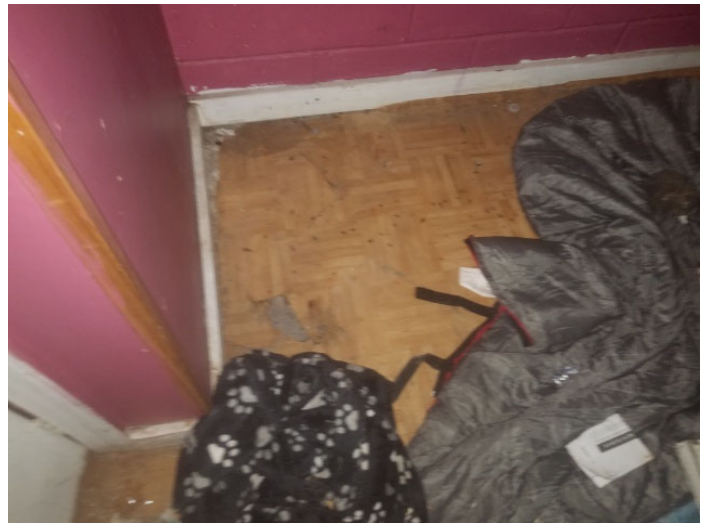


Photo 10 – Wood pattern roll vinyl flooring located in unit 1 bedroom.



Photo 11 – Hard caulk located in unit 4 laundry room



Photo 12 – Concrete floor under carpet.

**SECTION V**

**SC DHEC Asbestos Inspector License**

**SCDHEC ISSUED**  
Asbestos ID Card

**STEPHANIE HAMBY**



AIRSAMPLER  
CONSULTBI

AS-000632  
BI-01894

Expiration Date:  
08/05/22  
01/12/22