

Asbestos & Lead Based Paint Assessment

City of Spartanburg 319 Caudler Avenue Spartanburg, South Carolina 29306

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: 0120-17

August 12, 2020





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Apex Project Number 0120-17

August 12, 2020

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

Reference:

Asbestos and Lead-Based Paint Assessment Services

319 Caulder Avenue

Spartanburg, South Carolina 29306

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.

Tom Oliver Vice President

Appendices

ASBESTOS AND LEAD BASED PAINT ASSESSMENT

CITY OF SPARTANBURG 319 CAULDER AVENUE SPARTANBURG, SOUTH CAROLINA 29306

APEX PROJECT NO. 0120-17

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SECTION I

Asbestos & Lead Evaluation Report

ASBESTOS EVALUATION REPORT APEX PROJECT NUMBER: 0120-17

Date: 8/12/2020 Page Number: 1 of 4

Client: City of Spartanburg Client Contact: Mr. Jeff Tillerson

Client 440 South Church Street Client Phone (864) 596-2911

Address: Suite B Number: Spartanburg, SC 29306

Project: Asbestos Evaluation and

Lead Based Paint
Assessment

319 Caulder Avenue

Mauldin, SC 29662

Property

Address: Spartanburg, SC 29306

Assessor: Tom Oliver Date of 7/23/2020
Assessment:

Company: Apex Environmental

Management Phone (864) 404-3210
7 Winchester Court Number:

Purpose of Demolition Age of Approximately 60 years
Assessment: Structure:

Building Residential Number of 1 Type: Stories:

Foundation: Brick Crawlspace Approximate 1,225 SF

Square Footage

EXTERIOR BUILDING MATERIALS

- Pitched wooden roof with shingles & felt.
- Brick siding over unfinished drywall.
- Wooden windows with glazing.
- Windows & door casing caulk.
- Metal front porch awning with caulk/glazing.
- Metal awnings over windows with no caulk.
- Chimney tar on 1 chimney assumed to be ACM.

INTERIOR BUILDING MATERIALS

- Plaster with finish over unfinished drywall walls & ceiling throughout.
- Wooden floors.
- Multiple types & layers of vinyl flooring with & without mastics/adhesives.
- Vinyl flooring exists under wood.

City of Spartanburg 319 Caulder Avenue Apex Project No. 0120-17 August 12, 2020

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-eight (38) 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. Fifty-six (56) 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). Sixteen (16) samples were analyzed using TEM.

<u>Lead-Based Paint</u>

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. It should be noted that materials were identified to contain less than 1% asbestos and OSHA Construction Industry Asbestos Standards (29 CFR 1926.1101) will apply if those materials are disturbed during renovation or demolition activities. 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.

City of Spartanburg 319 Caulder Avenue Apex Project No. 0120-17 August 12, 2020

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

- Approximately 15 LF caulk/glazing on the metal awning over the front porch.
- Approximately 215 SF of the 5th layer (2nd layer under wood) of floor tile in the kitchen.
- Approximately 25 SF of the 3rd layer (1st layer under wood) of beige vinyl floor in the bathroom.
- Approximately 6 LF of tar on 1 chimney 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 μ g/m³) during an eight-hour workday and a permissible exposure level of fifty micrograms per cubic meter (50 μ g/m³) for employees.

Currently, EPA defines LBP as paint containing in excess of, or equal to, 1.0 mg/cm². 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.

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

Exterior:

- · White wooden soffit.
- White metal door lintels.

Interior:

· Tan wooden window systems.

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.

City of Spartanburg 319 Caulder Avenue Apex Project No. 0120-17 August 12, 2020

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 Environmental Protection Agency (EPA) define LBP as paint containing greater than 1.0 milligrams per square centimeter (mg/cm²) 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. The removed wastes would need to be containerized and further tested by Toxic Characteristic Leaching procedures (TCLP) to determine if the waste is classified as hazardous. The remaining building materials that are not painted with LBP may be disposed of in a construction and demolition landfill. 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 (μ g/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 319 Caulder Avenue NIP ACM-LBP

Sampled By: Tom Oliver

Project Location: 319 Caulder Avenue, Spartanburg, South Carolina 29306

Project Manager: Tom Oliver

Project Number: 0120-17

Date: 7/23/2020

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1		Deef chingles (1 lever) 9 felt	PLM - NAD			
2	Roof	Roof shingles (1 layer) & felt (1 layer)	T LIVI - NAD	Non-Friable	Good	1,400 SF
3		(1.12)	TEM - NAD			
4			PLM - NAD			
5	Wooden windows	Window glazing	1 201 - 1410	Non-Friable	Good	19 EA
6			TEM - NAD			
7	1864		PLM - NAD			
8	Wooden window & door casings	Casing caulk		Non-Friable		13 EA
9	Ozamga		TEM - NAD			
10			2% chrysotile		Good	
11	Metal window awning on the front porch	Awning caulk/glazing		Non-Friable		15 LF
12	on the front poton					
13	Throughout under brick		PLM - NAD	Friable	Good	
14	siding & in exterior back	Unfinished drywall				1,800 SF
15	storage room					
16			PLM - NAD			
17	Crawlspace	Gray HVAC mastic	1 - 1470	Non-Friable	Good	250 SF
18			TEM - NAD		<u> </u>	
19						
20		Di-A-avith finish ava-				
21	Throughout walls & ceilings	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	3,100 SF
22	Cennigs	anninance drywan			1	
23	1					

ASBESTOS SURVEY FIELD DATA SHEET PLM & TEM ANALYSIS

Project Name: COS 319 Caulder Avenue NIP ACM-LBP

Sampled By: Tom Oliver

Project Location: 319 Caulder Avenue, Spartanburg, South Carolina 29306

Project Manager: Tom Oliver

Date:

7/23/2020

Project Number: 0120-17

0120-17

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity	
24	Idiah B i- Ab - b albumu	Croon lorge equero pottorn vinul	PLM - NAD				
25	closet (top layer)	Green large square pattern vinyl floor & adhesive		Non-Friable	Good	220 SF	
26	Closet (top layer)		TEM - NAD		<u></u>		
27	leitah au	12" x 12" gray square pattern	PLM - NAD				
28	Kitchen (2nd & 3rd layers)	self-stick floor tile over floor tile		Non-Friable	Good	215 SF	
29	(21lu di Siu layers)	& adhesive	TEM - NAD				
30			PLM - NAD (tile 4 & mastics & tile 5		Good Good	1	
31	Kitchen (4th & 5th		mastic); 2% chrysotile (tile 5)	Non-Friable		215 SF	
32	layers under wood)		TEM - NAD (tile 4 & mastic); 0.79% chrysotile (tile 5 mastic)				
33	Dother are	12" x 12" wooden pattern self-	PLM - NAD	Non-Friable			
34	Bathroom (1st & 2nd layers)	stick floor tile over tan vinyl floor				25 SF	
35	- (15t dt 2110 layers)	& mastic	TEM - NAD				
36	Bathroom	Dalma viimul flane vaith ma					
37	(3rd layer under	Beige vinyl floor with no mastic	PLM - 8% chrysotile	Non-Friable	Good	25 SF	
38	wood)						
Assumed	Chimney	Tar on 1 chimney	Assumed	Non-Friable	Good	6 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 319 Caulder Avenue NIP ACM-LBP
 Sampled By:
 Tom Oliver

 Project Location:
 319 Caulder Avenue, Spartanburg, SC 29306
 Project Manager:
 Tom Oliver

<u>Project Number: 0120-17</u> <u>Date: 8/12/2020</u>

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m³)
1		184,00			
2		Calibration			1.18
· 3		Calibration		_	1.21
4		Calibration	•		1.19
5	Exterior	Front porch awning	White	Metal	0.00
6	Exterior	Front porch floor	Gray	Concrete	0.00
7	Exterior	Front porch door	White	Metal	0.00
8	Exterior	Front porch door casing	White	Wood	0.00
9	Exterior	Front porch handrail	Black	Metal	0.10
10	Exterior	Front porch awning post	Black	Metal	0,03
11	Exterior	Window	White	Wood	0.64
12	Exterior	Window casing	White	Wood	0.31
13	Exterior	Window lintel	White	Metal	0,37
14	Exterior	Storage room door	White	Wood	0.37
15	Exterior	Storage room door casing	White	Wood	0.31
16	Exterior	Soffit	White	Wood	2.83
17	Exterior	Fascia	White	Wood	0.00
18	Exterior	Door lintel	White	Metal	2.58
19	Interior	Wal!	Tan	Plaster	0.08
20	Interior	Ceiling	Tan	Plaster	0.05
21	Interior	Base board	Tan	Wood	0.07
22	Interior	Door	Tan	Wood	0.00
23	Interior	Door casing Tan Wood		Wood	0.01
24	Interior	Window Tan Wood		1.43	
25	Interior	Window sill	Tan	Wood	1.23

. Bold = LBP

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: 412006254 Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Tom Oliver

Apex Environmental Management

7 Winchester Court Mauldin, SC 29662 Phone: (864) 640-5274

Fax:

Received Date: 07/27/2020 9:30 AM **Analysis Date:** 07/30/2020 - 07/31/2020

Collected Date: 07/23/2020

Project: 0120-17 COS 319 Caulder Ave. (City of Spartanburg)

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

			Non-Asbes	stos	Asbestos
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
1-Shingle	Roof Shingle (1 Layer) with Tar & Felt (1 Layer)	Black Fibrous Homogeneous	8% Glass	5% Quartz 10% Ca Carbonate 77% Non-fibrous (Other)	None Detected
1-Felt 412006254-0001A	Roof Shingle (1 Layer) with Tar & Felt (1 Layer)	Black Non-Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
2-Shingle	Roof Shingle (1 Layer) with Tar & Felt (1 Layer)	Gray Fibrous Homogeneous	5% Glass	15% Quartz 15% Ca Carbonate 65% Non-fibrous (Other)	None Detected
2-Felt	Roof Shingle (1 Layer) with Tar & Felt	Black Fibrous	60% Cellulose	40% Non-fibrous (Other)	None Detected
412006254-0002A 4 412006254-0003	(1 Layer) Window Glazing	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
5 412006254-0004	Window Glazing	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
7	Window & Door Casing Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
412006254-0006	Window & Door Casing Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
10	Awning Caulk	Tan Non-Fibrous Homogeneous		20% Ca Carbonate 78% Non-fibrous (Other)	2% Chrysotile
11	Awning Caulk				Positive Stop (Not Analyzed
412006254-0008 13 412006254-0009	Unfinished Drywall	Tan Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
14	Unfinished Drywall	Tan Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
15 412006254-0011	Unfinished Drywall	Gray Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
16-Mastic	Gray HVAC Mastic	Gray Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
16-Wrap	Gray HVAC Mastic	Brown Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
17-Mastic	Gray HVAC Mastic	Gray Non-Fibrous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected

Report amended: 08/07/2020 12:40:13 Replaces initial report from: 07/31/2020 15:01:33 Reason Code: Client-Change to Project



EMSL Order: 412006254 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

			Non-Asbest	os	Asbestos
ample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
7-Wrap	Gray HVAC Mastic	Tan/Silver Non-Fibrous	40% Cellulose 5% Glass	55% Non-fibrous (Other)	None Detected
12006254-0013A		Homogeneous	Section with the second	75% Neg Shrous (Other)	None Detected
8-Wrap	Gray HVAC Mastic	Gray/Tan/Silver Fibrous	20% Cellulose 5% Glass	75% Non-fibrous (Other)	Hollo Dollato
12006254-0013B		Heterogeneous		20% Ca Carbonate	None Detected
9-Skim Coat	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		80% Non-fibrous (Other)	
12006254-0014	Di de d'Eleboyas			30% Quartz	None Detected
9-Rough Coat	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 65% Non-fibrous (Other)	
12006254-0014A	Plaster w/ Finish over	Gray	10% Cellulose	90% Non-fibrous (Other)	None Detected
19-Drywall	Unfinished Drywall	Non-Fibrous Homogeneous	, , , , , , , , , , , , , , , , , , , ,		
12006254-0014B	Distract Cinish over	White		10% Ca Carbonate	None Detected
20-Skim Coat	Plaster w/ Finish over Unfinished Drywall	Non-Fibrous Homogeneous		90% Non-fibrous (Other)	
112006254-0015	Plaster w/ Finish over	Gray		40% Quartz	None Detected
20-Rough Coat	Plaster w/ Finish over Unfinished Drywall	Non-Fibrous Homogeneous		5% Ca Carbonate 55% Non-fibrous (Other)	
412006254-0015A	Disease w/ Einigh over		10% Cellulose	90% Non-fibrous (Other)	None Detected
20-Drywall 412006254-0015B	Unfinished Drywall Fibrous				
	Plaster w/ Finish over	White		15% Ca Carbonate	None Detected
21-Skim Coat	Unfinished Drywall	Non-Fibrous Homogeneous		85% Non-fibrous (Other)	
412006254-0016	Plaster w/ Finish over	Tan		30% Quartz	None Detected
21-Rough Coat 412006254-0016A	Unfinished Drywall	Non-Fibrous Homogeneous		70% Non-fibrous (Other)	
140	Plaster w/ Finish over	Gray	10% Cellulose	90% Non-fibrous (Other)	None Detected
21-Drywall 412006254-0016B	Unfinished Drywall	Non-Fibrous Homogeneous	man source of management		
	Plaster w/ Finish over	White		10% Ca Carbonate	None Detected
22-Skim Coat	Unfinished Drywall	Non-Fibrous		90% Non-fibrous (Other)	
412006254-0017		Homogeneous		000/ 0 1-	None Detected
22-Rough Coat	Plaster w/ Finish over	Gray		30% Quartz 8% Ca Carbonate	Holle Detected
	Unfinished Drywall	Non-Fibrous Homogeneous		62% Non-fibrous (Other)	
412006254-0017A	Distance Flatsh		10% Cellulose	90% Non-fibrous (Other)	None Detected
22-Drywall	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous	1070 Celluloso		
412006254-0017B	Dioctor of Clainb areas	White		8% Ca Carbonate	None Detected
23-Skim Coat	Plaster w/ Finish over Unfinished Drywall	Non-Fibrous Homogeneous		92% Non-fibrous (Other)	
412006254-0018	Plaster w/ Finish over	Gray	1% Cellulose	30% Quartz	None Detected
23-Rough Coat 412006254-0018A	Unfinished Drywall	Non-Fibrous Homogeneous		8% Ca Carbonate 61% Non-fibrous (Other)	
- Care -	Plaster w/ Finish over	Gray	10% Cellulose	90% Non-fibrous (Other)	None Detected
23-Drywall 412006254-0018B	Unfinished Drywall	Non-Fibrous Homogeneous			
Strie studes at the	Green Large Square	Gray		10% Ca Carbonate	None Detected
24-Flooring	Pattern Vinyl Floor & Adhesive	Non-Fibrous Homogeneous		90% Non-fibrous (Other)	
412006254-0019 24-Mastic	Green Large Square Pattern Vinyl Floor &	Tan Non-Fibrous	1% Cellulose	99% Non-fibrous (Other)	None Detected
	Adhesive	Homogeneous			

Report amended: 08/07/2020 12:40:13 Replaces initial report from: 07/31/2020 15:01:33 Reason Code: Client-Change to Project



EMSL Order: 412006254 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

Zer		•	Non-Asber	The second of th	Asbestos % Tuno
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
25-Flooring	Green Large Square Pattern Vinyl Floor & Adhesive	Gray/White Fibrous Heterogeneous	3% Glass	5% Ca Carbonate 92% Non-fibrous (Other)	None Detected
25-Mastic 412006254-0020A	Green Large Square Pattern Vinyl Floor & Adhesive	Tan Non-Fibrous Homogeneous	5% Ca Carbonate 95% Non-fibrous (Other)		None Detected
27-Flooring 2 412006254-0021	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Beige Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
27-Floor Tile 3 412006254-0021A	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Gray/White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
27-Mastic 412006254-0021B	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Clear Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
28-Flooring 2 412006254-0022	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Gray/Tan Fibrous Heterogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
28-Floor Tile 3 412006254-0022A	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Gray/Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
28-Mastic 412006254-0022B	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
30-Floor Tile 4 412006254-0023	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Brown/Tan Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
30-Mastic 412006254-0023A	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Yellow Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
30-Floor Tile 5 412006254-0023B	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Brown Non-Fibrous Homogeneous		40% Ca Carbonate 56% Non-fibrous (Other)	4% Chrysotile
30-Mastic 412006254-0023C	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
31-Floor Tile 4 412006254-0024	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Yellow/Green Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
31-Mastic 412006254-0024A	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
31-Floor Tile 5 412006254-0024B	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic				Positive Stop (Not Analyzed)

Report amended: 08/07/2020 12:40:13 Replaces initial report from: 07/31/2020 15:01:33 Reason Code: Client-Change to Project



EMSL Order: 412006254 Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Achostos

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

		Asbestos			
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type
31-Mastic #12006254-0024C	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Beige Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
33-Floor Tile #12006254-0025	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
33-Flooring 412006254-0025A	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan/White Non-Fibrous Homogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
33-Mastic 412006254-0025B	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
34-Floor Tile 412006254-0026	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
34-Flooring 412006254-0026A	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Gray/Tan Fibrous Heterogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
34-Mastic 412006254-0026B	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-Flooring 412006254-0027 No mastic present	Beige Vinyl Floor & Mastic	Tan Fibrous Homogeneous		10% Ca Carbonate 82% Non-fibrous (Other)	8% Chrysotile
37-Flooring 412006254-0028 No mastic present	Beige Vinyl Floor & Mastic				Positive Stop (Not Analyzed)

Analyst(s)

Eric Loomis (25) Sarah Breneman (31) Lee Plumley, Laboratory Manager or Other Approved Signatory

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



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: 412006254 Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Tom Oliver

Apex Environmental Management

7 Winchester Court Mauldin, SC 29662 Phone: (864) 640-5274

Fax:

Received Date: 07/27/2020 9:30 AM

Analysis Date: 08/06/2020 **Collected Date:** 07/23/2020

Project: 0120-17 COS 319 Caulder Ave. (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 412006254-0029	Roof Shingle (1 Layer) with Tar & Felt (1 Layer)	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
3-Felt 412006254-0030	Roof Shingle (1 Layer) with Tar & Felt (1 Layer)	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
3 412006254-0031	Window Glazing	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
9 412006254-0032	Window & Door Casing Caulk	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
18-Mastic 412006254-0033	Gray HVAC Mastic	Gray Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
26-Flooring 412006254-0034	Green Large Square Pattern Vinyl Floor & Adhesive	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
26-Mastic 412006254-0035	Green Large Square Pattern Vinyl Floor & Adhesive	Yellow Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
29-Flooring 2 412006254-0036	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Gray/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
29-Floor Tile 3 412006254-0037	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
29-Mastic 412006254-0038	Gray Square Pattern 12"x12" Self-Stick F.T. over 3rd Layer of Floor Tile & Adhesive	Clear Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
32-Floor Tile 4 412006254-0039	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Tan/White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		
32-Mastic 412006254-0040	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected		

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Report amended: 08/07/2020 12:40:13 Replaces initial report from: 08/07/2020 08:39:09 Reason Code: Client-Change to Project



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: 412006254 Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Tom Oliver

Apex Environmental Management

7 Winchester Court Mauldin, SC 29662 Phone: (864) 640-5274

Fax:

Received Date: 07/27/2020 9:30 AM Analysis Date: 08/06/2020 Collected Date: 07/23/2020

Project: 0120-17 COS 319 Caulder Ave. (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
32-Mastic 412006254-0041	12"x12" Brown Floor Tile & Mastic over 5th Layer of Floor Tile & Mastic	White Non-Fibrous Homogeneous	99.21 Other	None	0.79% Chrysotile
35-Floor Tile 412006254-0042	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Brown/Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
35-Flooring 412006254-0043	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan/White Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
35-Mastic 412006254-0044	12"x12" Wooden Pattern Self-Stick Floor Tile over Tan Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analy	yst(s)
-------	--------

Demick Young (16)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L. Plumber

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Report amended: 08/07/2020 12:40:13 Replaces initial report from: 08/07/2020 08:39:09 Reason Code: Client-Change to Project

OrderID: 412006254



Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (lab use only):

EIVISL Analytical, Inc. 10801 Southern Loop Blvd

Pineville, NC 28134

Phone

(704) 525-2205 Fax (704) 525-2382

						,	·
Company Name : Apex Environmental Management, Inc.				_	SL Customer ID:		
Street: 7 Wi	nchester Co	ourt	·		y: Mauldin		State or Province: SC
Zip/Postal Code			Country: US	Tel	<u>ephone #: 86440</u>	43210	Fax #:
Report To (Nam	e): Tom	Oliver		Ple	<u>ase Provide Resu</u>	lts via: 🔲	Fax
email Address:		apex-ehs.c			chase Order Num		· · · · · · · · · · · · · · · · · · ·
Client Project II			319 Caulder H		SL Project ID (inte		
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<u> </u>	-	'32 Ha	our TAT available for select tests lease call ahead for large project	only; ser	nples must be submitted	by 11:30am.	
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PLM EPA 600				ZTE	M EPA NOB – EPA	A 600/R-93/	116 Section 2.5.5.1
PLM EPA NO	B (<1%)	•		[□ אי	ELAP Method 198	3.4 non-friab	le - NY
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Point Count w/G	ravimetric 🗌	400 (<0.25%	6) 🔲 1000 (<0.1%)		-		/116 Section 2.5.5.2
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NY ELAP Me				☐ TE	TEM Qualitative via Drop Mount Prep Technique		
NY ELAP Me					Other tests (please specify)		
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☐ EMSL Stand		Method	•				
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6						TEN	2
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Comments/Spe Positive step on all sumples Batter Apes Environmental I Attention Rebects Shuttz Pi	danagement, Inc., 7 Win	rchester Court, Mauklin,	stive slop on drywall and tapo layers SC, 29682, US n Purchase Order:	_			7958 9825 0618
							Page 1 of 9

Gentrolled Document - COC-01 Asbestos Bulk - R4 - 09/10/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) 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.

OrderID:	412006254
	EMSL

EMSL ANALYTICAL, INC.

Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (lab use only):

EMSL Analytical, Inc.
10801 Southern Loop Blv

6254

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
?		Window + dow Casing Caulk	PLM
8			1 1
9			TEM
<u> </u> b_		Anning Caulk	PLM
ll			1
(2			TEM
_13		Untinished drywall	1/LM
14			
15 16		11,000,000	PLM
		Gray HVAC mastic	
18		<u> </u>	TEMO'
18	•	Placter / Bich auge	PLM
20		Plaster of finish over	
21		UNITED OFFICE	
22			
23			
		Green large square lattern,	PLM
24 25		Viryl floor + adhesive	
26			TEM
	ts/Special Ir		

*Comments/Special Instructions:
Positive stop on all samples. If joint compound on drywall is positive, then positive stop on drywall and tape layers.
BillTo: Apex Environmental Management, Inc., 7 Winchester Court, Mauldin, SC, 29662, US
Attention: Rebecca Shultz Phone: 8644043210 Email: rshultz@apex-ehs.com Purchase Order:

Page 7 of 2 pages

Controlled Document - COC-01 Asbestos Bulk - R4 - 09/10/2019

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OrderID: 412006254



Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (lab use only):

Ouy	10801 Southern Loop Blvd
(lab use only):	1000 : 000m = 110

6254

Pineville, NC 28134 Phone (704) 525-2205 Fax (704) 525-2382

EMSL Analytical, Inc.

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

Sample #	HA#	Sample Location	Material Description
27		Gray square fothern 12"x12"1	PLM
28		Self-struk HTF.T. over 2 layor	
29		of floortile + alhesive _	TEM
30		12 "x12" brown for the +	PLM
31		mastic over 5th law of	<u></u>
32		floor the 2 Mastin	TEM
133		Reize Viny/ Hoof	KM
134		mastic	70.
35		To	TEM
33.		12"x124 bironder fothern self-stak	pt _r M
34	-	floor tile over tan viny	
35		floor & mastic	TEM
37		Beige viry foort	PLM
37		mastic	<u> </u>
38		<u> </u>	Tem
1			

Attention: Rebecca Shultz Phone: 8644043210 Email: rshultz@apex-ehs.com Purchase Order:

Page 2 of 2 pages

Controlled Document - COC-01 Asbestos Bulk - R4 - 09/10/2019

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SECTION IV

Photographic Log



Photo 1 – 319 Caulder Avenue Street in Spartanburg, South Carolina 29306



Photo 2 - Roof shingles & felt paper

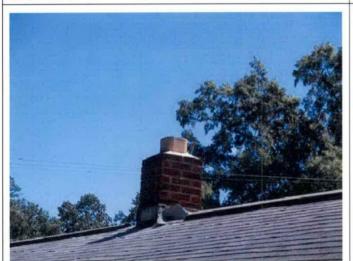


Photo 3 - 1 chimney with tar - assumed positive



Photo 4 - Wooden window glazing



Photo 5 - Window & door casing caulk



Photo 6 – Caulk/glazing on the metal awning over the front porch



Photo 7 – Unfinished drywall in the exterior back storage room



Photo 8 - Unfinished drywall throughout under brick siding



Photo 9 – Plaster with finish over unfinished drywall ceilings throughout



Photo 10 – Plaster with finish over unfinished drywall walls throughout



Photo 11 –Green large square pattern vinyl floor & adhesive in the kitchen & in the hallway closet (top layer)



Photo 12 - 12" x 12" gray square pattern self-stick floor tile over floor tile & adhesive in the kitchen ($2^{nd}/3^{rd}$ layers)



Photo 13 – 12" x 12" brown floor tile & mastic over floor tile & mastic in the kitchen (4th & 5th layers under wood)



Photo 14 – 12" x 12" wooden pattern self-stick floor tile over tan vinyl floor & mastic in the bathroom (1st & 2nd layers)



Photo 15 – Beige vinyl floor with no mastic in the bathroom (3rd layer under wood)

SECTION V

SC DHEC Asbestos Inspector License

SCDHEC ISSUED

Asbestos ID Card

Thomas H Oliver



AIRSAMPLER AS-00202 CONSULTBI BI-00680 Expiration Date: 06/18/21 01/15/21

This card is nontransferable and 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

SCDHEC – Asbestos Section 2600 Bull Street Columbia, SC 29201 (803) 898-4289