



Asbestos & Lead Based Paint Assessment

City of Spartanburg
276 Fremont Avenue
Spartanburg, South Carolina 29303

Prepared for:

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

Prepared by:

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

Project Number: 0119-09

March 15, 2019





Apex Project Number 0119-09

March 15, 2019

7 Winchester Court
Mauldin, SC 29662
864.404.3210 office
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Mr. Jeff Tillerson
City of Spartanburg
440 South Church Street, Suite B
Spartanburg, SC 29306

Reference: Asbestos and Lead-Based Paint Assessment Services
276 Fremont Avenue
Spartanburg, South Carolina 29303

SERVICES

- Indoor Air Quality
- Mold Remediation
- Asbestos & Lead
- Industrial Hygiene
- Worker Health & Safety
- Mold Consulting
- Moisture Management Plans
- Safety Assessment
- Environmental Site Assessments
- Hazard Communication

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

ASBESTOS AND LEAD BASED PAINT ASSESSMENT

**CITY OF SPARTANBURG
276 FREMONT AVENUE
SPARTANBURG, SOUTH CAROLINA 29303**

APEX PROJECT NO. 0119-09

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SECTION I

Asbestos & Lead Evaluation Report

ASBESTOS EVALUATION REPORT
APEX PROJECT NUMBER: 0119-09

Date: 3/15/2019 Page Number: 1 of 4

Client: City of Spartanburg Client Contact: Mr. Jeff Tillerson
Client Address: 440 South Church Street Client Phone: (864) 596-2911
Suite B Number:
Spartanburg, SC 29306

Project: Asbestos Evaluation and Lead Based Paint Assessment
Property Address: 276 Fremont Avenue
Spartanburg, SC 29303

Assessor: Tom Oliver Date of Assessment: 2/26/2019
Company: Apex Environmental Management Phone Number: (864) 404-3210
7 Winchester Court
Mauldin, SC 29662

Purpose of Assessment: Demolition Age of Structure: Approximately 95 years

Building Type: Residential Number of Stories: 2

Foundation: Brick Crawlspace Approximate Square Footage: 1,450 SF

EXTERIOR BUILDING MATERIALS

- Pitched wooden with roof shingles & felt on the main roof.
- Flat metal roof with felt paper beneath on the side porch.
- Wooden shake shingle siding.
- Wooden windows with caulk & glazing.
- Wooden doors with no caulk.

INTERIOR BUILDING MATERIALS

- Plaster with finish throughout and portions exist under drywall in the living room.
- Drywall with joint compound & tape walls & ceiling in the living room and ceiling and stairway in the dining room.
- Ceiling texture in the living room, dining room & left bedroom.
- Multiple types & layers of vinyl flooring with & without mastics.
- Vinyl flooring exists under wood.

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 (50) 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. 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). Thirty-one (31) 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. No asbestos was detected in the samples collected and analyzed. Should additional suspect ACM should be discovered during demolition activities, Apex recommends that work activities stop until the suspect building materials may be sampled and analyzed. A specific *PLM and TEM Data Table* is located in Appendix II of this report and identifies suspect materials and designates approximate quantities.

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, SCDHEC 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 siding under vinyl.
- White wooden posts, ceiling and ceiling header on the front stoop.
- White wooden roof overhang and framing.
- White wooden back door and door casing.
- White wooden columns, header boards and ceiling framing on the side porch.

Interior:

- White wooden door on 2nd floor.

RECOMMENDATIONS AND DISCUSSION

No asbestos was present in the materials sampled within the structure. Therefore, no recommendations are necessary at this time.

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the building spaces. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Should additional suspect ACM be discovered during demolition activities, Apex recommends that work activities stop until the suspect building material may be sampled and analyzed.

Our assessment procedures and recommendations are based on the guidelines presented in EPA (NESHAP), State of Georgia or OSHA asbestos regulations.

Lead-Based Paint

Currently SCDHEC defines LBP as paint containing greater than 1.0 milligrams per square centimeter (mg/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 (mg/L) lead may be disposed of in a Class 3 landfill and is considered to be non-hazardous. LBP residues that have TCLP sample results equal to or greater than 5 mg/L lead should be disposed of in a Subtitle C landfill and is considered to be hazardous. However, the landfills should be contacted to determine their specific disposal requirements.

Occupational Safety and Health Administration Lead Regulations apply to actions initiated on lead containing materials. This regulation applies to lead concentrations greater than the analytical limit of detection. This regulation sets exposure levels on airborne lead and does not reference the percent lead in paint. Therefore, initial personal air monitoring should be conducted on workers performing work on surfaces which have a lead concentration of 0.1 mg/cm² or above to satisfy the OSHA requirements. If a baseline exposure lower than the OSHA Action Level of 30 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) 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 276 Fremont Avenue ACM/LBP

Sampled By: Tom Oliver

Project Location: 276 Fremont Avenue, Spartanburg, South Carolina 29303

Project Manager: Rebecca Shultz

Project Number: 0119-09

Date: 2/26/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Wooden windows	Window glazing	PLM - NAD	Non-Friable	Good	4 EA
2			TEM - NAD			
3						
4	Wooden windows	Window caulk	PLM - NAD	Non-Friable	Good	9 EA
5			TEM - NAD			
6						
7	Main roof	Roof shingles (1 layer) & felt (1 layer) with tar	PLM - NAD	Non-Friable	Good	2,300 SF
8			TEM - NAD			
9						
10	Side porch roof	Felt under metal roof	PLM - NAD	Non-Friable	Good	108 SF
11			TEM - NAD			
12						
13	Living room entries, kitchen & bathroom Top layer	Brown square vinyl floor & mastic	PLM - NAD	Non-Friable	Good	140 SF
14			TEM - NAD			
15						
16	Right bedroom (single layer); living room & dining room (2nd layer)	Beige streaked 9" x 9" floor tile with mastic & felt	PLM - NAD	Non-Friable	Good	305 SF
17			TEM - NAD			
18						
19	Left bedroom single layer); living room & dining room (2nd layer)	Brown 9" x 9" floor tile with mastic & felt	PLM - NAD	Non-Friable	Good	307 SF
20			TEM - NAD			
21						
22	Dining room Top layer	Wood grain vinyl floor & no mastic	PLM - NAD	Non-Friable	Good	180 SF
23			TEM - NAD			
24						

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PLM & TEM ANALYSIS**

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Sampled By: Tom Oliver

Project Location: 276 Fremont Avenue, Spartanburg, South Carolina 29303

Project Manager: Rebecca Shultz

Project Number: 0119-09

Date: 2/26/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25	Living room Top layer	Light wood grain vinyl floor & mastic	PLM - NAD	Non-Friable	Good	290 SF
26			TEM - NAD			
27						
28	Pantry Top layer	Beige square vinyl floor & mastic	PLM - NAD	Non-Friable	Good	41 SF
29			TEM - NAD			
30						
31	Pantry 2nd layer	12" x 12" wood grain pattern self-stick floor tile with mastic over 3rd layer of vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	41 SF
32			TEM - NAD			
33						
34	Kitchen 2nd layer	9" x 9" floor tile with backing, felt & mastics	PLM - NAD	Non-Friable	Good	105 SF
35			TEM - NAD			
36						
37	Bathroom 2nd layer	9" x 9" floor tile with felt & mastics	PLM - NAD	Non-Friable	Good	35 SF
38			TEM - NAD			
39						
40	Living room, dining room & left bedroom	Ceiling texture	PLM - NAD	Friable	Good	510 SF
41						
42						
43	Living room walls & ceiling & stairway wall & ceiling in dining room	Drywall with joint compound & tape	PLM - NAD	Friable	Good	950 SF
44						
45						
46	SAMPLE NUMBERS NOT USED					
47						

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

Project Name: COS 276 Fremont Avenue ACM/LBP

Sampled By: Tom Oliver

Project Location: 276 Fremont Avenue, Spartanburg, South Carolina 29303

Project Manager: Rebecca Shultz

Project Number: 0119-09

Date: 2/26/2019

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Throughout	Plaster with finish	PLM - NAD	Friable	Good	4,000 SF
49						
50						
51						
52						

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
LBP ANALYSIS**

Project Name: COS 276 Fremont Avenue ACM/LBP

Sampled By: Tom Oliver

Project Location: 276 Fremont Avenue, Spartanburg, SC 29303

Project Manager: Rebecca Shultz

Project Number: 0119-09

Date: 2/26/2019

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m ³)
1		Standardization			185.00
2		Calibration			1.18
3		Calibration			1.20
4		Calibration			1.17
5	Exterior	Shake shingle siding	Brown	Wood	0.43
6	Exterior	Front door	White	Wood	0.00
7	Exterior	Front door casing	White	Wood	0.00
8	Exterior	Front door threshold	White	Wood	0.00
9	Exterior	Front stoop post	White	Wood	2.83
10	Exterior	Front stoop ceiling	White	Wood	1.61
11	Exterior	Front stoop ceiling header	White	Wood	2.76
12	Exterior	Front stoop roof gable	White	Wood	2.44
13	Exterior	Roof overhang	White	Wood	4.26
14	Exterior	Window	White	Wood	0.00
15	Exterior	Window casing	White	Wood	0.00
16	Exterior	Siding skirt	Brown	Wood	0.00
17	Exterior	Roof overhang frame	White	Wood	3.11
18	Exterior	Back door	White	Wood	3.72
19	Exterior	Back door casing	White	Wood	3.65
20	Exterior	Side porch column	White	Wood	4.35
21	Exterior	Side porch header	White	Wood	5.00
22	Exterior	Side porch ceiling	White	Wood	0.00
23	Exterior	Side porch ceiling frame	White	Wood	2.44
24	Exterior	Side porch floor	Blue	Wood	0.00
25	Exterior	Side porch floor skirt	Blue	Wood	0.00

**FIELD DATA SHEET
LBP ANALYSIS**

Project Name: COS 276 Fremont Avenue ACM/LBP

Sampled By: Tom Oliver

Project Location: 276 Fremont Avenue, Spartanburg, SC 29303

Project Manager: Rebecca Shultz

Project Number: 0119-09

Date: 2/26/2019

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m ³)
26	Interior-1st Floor	Double door	White	Wood	0.00
27	Interior-1st Floor	Double door casing	White	Wood	0.00
28	Interior-1st Floor	Door	White	Wood	0.05
29	Interior-1st Floor	Door casing	White	Wood	0.01
30	Interior-1st Floor	Window	White	Wood	0.06
31	Interior-1st Floor	Window casing	White	Wood	0.20
32	Interior-1st Floor	Wall	White	Drywall	0.00
33	Interior-1st Floor	Ceiling	White	Drywall	0.00
34	Interior-1st Floor	Base board	White	Wood	0.00
35	Interior-1st Floor	Wall	White	Bead board	0.00
36	Interior-1st Floor	Fireplace mantle	White	Wood	0.00
37	Interior-1st Floor	Fireplace	Brown	Brick	0.03
38	Interior-1st Floor	Cabinets	White	Wood	0.49
39	Interior-1st Floor	Pantry shelves	White	Wood	0.00
40	Interior-1st Floor	Ceiling	White	Bead board	0.00
41	Interior-1st Floor	Stairs	Brown	Bead board	0.00
42	Interior-2nd Floor	Wall	White	Wood	0.00
43	Interior-2nd Floor	Ceiling	White	Wood	0.00
44	Interior-2nd Floor	Door	White	Wood	5.00
45	Interior-2nd Floor	Door casing	White	Wood	0.00
46		Calibration			1.20
47		Calibration			1.19
48		Calibration			1.15

Bold = LBP FF = Factory Finish

SECTION III

Laboratory Analytical Results



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: 411901865

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Rebecca Shultz
Apex Environmental Management
7 Winchester Court
Mauldin, SC 29662

Phone: (864) 404-3210

Fax:

Received Date: 02/27/2019 9:10 AM

Analysis Date: 03/04/2019

Collected Date: 02/26/2019

Project: COS 276 Fremont (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 <small>411901865-0001</small>	Window Glazing	Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
2 <small>411901865-0002</small>	Window Glazing	Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
4 <small>411901865-0003</small>	Window Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
5 <small>411901865-0004</small>	Window Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
7-Shingle <small>411901865-0005</small>	Shingle & Felt	Gray/Black Fibrous Heterogeneous	5% Glass	15% Quartz 15% Ca Carbonate 65% Non-fibrous (Other)	None Detected
7-Tar <small>411901865-0005A</small>	Shingle & Felt	Black Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
7-Felt <small>411901865-0005B</small>	Shingle & Felt	Black Non-Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
8-Shingle <small>411901865-0006</small>	Shingle & Felt	Gray/Black Fibrous Homogeneous	5% Glass	10% Quartz 15% Ca Carbonate 70% Non-fibrous (Other)	None Detected
8-Tar <small>411901865-0006A</small>	Shingle & Felt	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
8-Felt <small>411901865-0006B</small>	Shingle & Felt	Black Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
10 <small>411901865-0007</small>	Felt under Metal Roof	Black Non-Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
11 <small>411901865-0008</small>	Felt under Metal Roof	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
13-Flooring <small>411901865-0009</small>	Brown Sq. Vinyl Floor & Mastic	Beige Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
13-Mastic <small>411901865-0009A</small>	Brown Sq. Vinyl Floor & Mastic	Brown Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
14-Flooring <small>411901865-0010</small>	Brown Sq. Vinyl Floor & Mastic	Brown Non-Fibrous Homogeneous	4% Synthetic	10% Ca Carbonate 86% Non-fibrous (Other)	None Detected
14-Mastic <small>411901865-0010A</small>	Brown Sq. Vinyl Floor & Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 03/05/2019 07:44:25



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: 411901865
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
16-Floor Tile 411901865-0011	Beige Str. 9" FT & Mastic	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
16-Mastic 411901865-0011A	Beige Str. 9" FT & Mastic	Brown Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
16-Felt 411901865-0011B	Beige Str. 9" FT & Mastic	Black Non-Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
17-Floor Tile 411901865-0012	Beige Str. 9" FT & Mastic	Brown Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
17-Mastic 411901865-0012A	Beige Str. 9" FT & Mastic	Brown Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
17-Felt 411901865-0012B	Beige Str. 9" FT & Mastic	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
19-Floor Tile 411901865-0013	Brown 9" FT & Mastic	Brown Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
19-Mastic 411901865-0013A	Brown 9" FT & Mastic	Brown Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
19-Felt 411901865-0013B	Brown 9" FT & Mastic	Black Non-Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
20-Floor Tile 411901865-0014	Brown 9" FT & Mastic	Brown Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
20-Mastic 411901865-0014A	Brown 9" FT & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
20-Felt 411901865-0014B	Brown 9" FT & Mastic	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
22 411901865-0015	Woodgrain Vinyl	Brown/White Fibrous Heterogeneous	4% Glass	15% Ca Carbonate 81% Non-fibrous (Other)	None Detected
23 411901865-0016	Woodgrain Vinyl	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
25-Flooring 411901865-0017	Light Woodgrain Vinyl	Brown/Gray Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
25-Mastic 411901865-0017A	Light Woodgrain Vinyl	Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
26-Flooring 411901865-0018	Light Woodgrain Vinyl	Brown Fibrous Homogeneous	1% Glass	15% Ca Carbonate 84% Non-fibrous (Other)	None Detected
26-Mastic 411901865-0018A	Light Woodgrain Vinyl	Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
28-Flooring 411901865-0019	Beige Sq. Pattern Vinyl	Gray/White Fibrous Heterogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 03/05/2019 07:44:25



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EMSL Order: 411901865
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
28-Mastic 411901865-0019A	Beige Sq. Pattern Vinyl	Tan Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
29-Flooring 411901865-0020	Beige Sq. Pattern Vinyl	Tan Non-Fibrous Homogeneous	4% Glass	10% Ca Carbonate 86% Non-fibrous (Other)	None Detected
29-Mastic 411901865-0020A	Beige Sq. Pattern Vinyl	Tan Non-Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
31-Floor Tile 411901865-0021	Woodgrain Self Adhesive Tile	Brown/Gray Fibrous Heterogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
31-Mastic 411901865-0021A	Woodgrain Self Adhesive Tile	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
31-Flooring 411901865-0021B	Woodgrain Self Adhesive Tile	Brown/Black Fibrous Heterogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
32-Floor Tile 411901865-0022	Woodgrain Self Adhesive Tile	Gray/Black Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
32-Mastic 411901865-0022A	Woodgrain Self Adhesive Tile	Clear Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
32-Flooring 411901865-0022B	Woodgrain Self Adhesive Tile	Brown/Black Fibrous Homogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
34-Backing 411901865-0023	Kitchen - 2nd Layer FT & Mastic	Gray Fibrous Heterogeneous	20% Cellulose 1% Glass	79% Non-fibrous (Other)	None Detected
34-Mastic 411901865-0023A	Kitchen - 2nd Layer FT & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
34-Floor Tile 411901865-0023B	Kitchen - 2nd Layer FT & Mastic	Beige Non-Fibrous Homogeneous	1% Cellulose	8% Ca Carbonate 91% Non-fibrous (Other)	None Detected
34-Mastic 411901865-0023C	Kitchen - 2nd Layer FT & Mastic	Brown/Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
34-Felt 411901865-0023D	Kitchen - 2nd Layer FT & Mastic	Black Fibrous Heterogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
35-Backing 411901865-0024	Kitchen - 2nd Layer FT & Mastic	White Fibrous Homogeneous	15% Cellulose	10% Ca Carbonate 75% Non-fibrous (Other)	None Detected
35-Mastic 411901865-0024A	Kitchen - 2nd Layer FT & Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
35-Floor Tile 411901865-0024B	Kitchen - 2nd Layer FT & Mastic	Beige Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
35-Mastic 411901865-0024C	Kitchen - 2nd Layer FT & Mastic	Brown/Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
35-Felt 411901865-0024D	Kitchen - 2nd Layer FT & Mastic	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected

Initial report from: 03/05/2019 07:44:25



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: 411901865
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-Mastic <i>411901865-0025</i>	Bath - 2nd Layer FT & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
37-Floor Tile <i>411901865-0025A</i>	Bath - 2nd Layer FT & Mastic	Brown Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
37-Mastic <i>411901865-0025B</i>	Bath - 2nd Layer FT & Mastic	Brown/Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
37-Felt <i>411901865-0025C</i>	Bath - 2nd Layer FT & Mastic	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
38-Mastic <i>411901865-0026</i>	Bath - 2nd Layer FT & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
38-Floor Tile <i>411901865-0026A</i>	Bath - 2nd Layer FT & Mastic	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-Mastic <i>411901865-0026B</i>	Bath - 2nd Layer FT & Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
38-Felt <i>411901865-0026C</i>	Bath - 2nd Layer FT & Mastic	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
40 <i>411901865-0027</i>	Ceiling Texture	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
41-Drywall <i>411901865-0028</i>	Ceiling Texture	Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
41-Texture <i>411901865-0028A</i>	Ceiling Texture	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
42-Rough Coat <i>411901865-0029</i>	Ceiling Texture	Tan Non-Fibrous Homogeneous		25% Quartz 10% Ca Carbonate 65% Non-fibrous (Other)	None Detected
42-Texture <i>411901865-0029A</i>	Ceiling Texture	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
43-Drywall <i>411901865-0030</i>	Drywall & Joint Comp.	Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
43-Joint Compound <i>411901865-0030A</i>	Drywall & Joint Comp.	White Non-Fibrous Homogeneous	<1% Cellulose	40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
43-Tape <i>411901865-0030B</i>	Drywall & Joint Comp.	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
44-Drywall <i>411901865-0031</i>	Drywall & Joint Comp.	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
44-Joint Compound <i>411901865-0031A</i>	Drywall & Joint Comp.	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
44-Tape <i>411901865-0031B</i>	Drywall & Joint Comp.	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected

Initial report from: 03/05/2019 07:44:25



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EMSL Order: 411901865
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
45-Drywall <i>411901865-0032</i>	Drywall & Joint Comp.	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
45-Joint Compound <i>411901865-0032A</i>	Drywall & Joint Comp.	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
45-Tape <i>411901865-0032B</i>	Drywall & Joint Comp.	Tan Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
48-Surfacing <i>411901865-0033</i>	Plaster	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
48-Skim Coat <i>411901865-0033A</i>	Plaster	White Non-Fibrous Homogeneous		20% Quartz 10% Ca Carbonate 70% Non-fibrous (Other)	None Detected
48-Rough Coat <i>411901865-0033B</i>	Plaster	Tan Non-Fibrous Homogeneous		20% Quartz 8% Ca Carbonate 72% Non-fibrous (Other)	None Detected
49-Skim Coat <i>411901865-0034</i>	Plaster	White Non-Fibrous Homogeneous		20% Quartz 10% Ca Carbonate 70% Non-fibrous (Other)	None Detected
49-Rough Coat <i>411901865-0034A</i>	Plaster	Tan Non-Fibrous Homogeneous		20% Quartz 8% Ca Carbonate 72% Non-fibrous (Other)	None Detected
50-Skim Coat <i>411901865-0035</i>	Plaster	White Non-Fibrous Homogeneous		10% Quartz 8% Ca Carbonate 82% Non-fibrous (Other)	None Detected
50-Rough Coat <i>411901865-0035A</i>	Plaster	Tan Non-Fibrous Homogeneous		25% Quartz 8% Ca Carbonate 67% Non-fibrous (Other)	None Detected
51-Skim Coat <i>411901865-0036</i>	Plaster	White Non-Fibrous Homogeneous		25% Quartz 10% Ca Carbonate 65% Non-fibrous (Other)	None Detected
51-Rough Coat <i>411901865-0036A</i>	Plaster	Gray/Tan Fibrous Homogeneous		25% Quartz 8% Ca Carbonate 67% Non-fibrous (Other)	None Detected
52-Skim Coat <i>411901865-0037</i>	Plaster	White Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
52-Rough Coat <i>411901865-0037A</i>	Plaster	Gray/Tan Fibrous Homogeneous		25% Quartz 8% Ca Carbonate 67% Non-fibrous (Other)	None Detected

Lee Plumley, Laboratory Manager
or Other Approved Signatory

Analyst(s)
Eric Loomis (47)
Sarah Breneman (40)

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. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 03/05/2019 07:44:25



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EMSL Order: 411901865

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Rebecca Shultz
Apex Environmental Management
7 Winchester Court
Mauldin, SC 29662

Phone: (864) 404-3210
Fax:
Received Date: 02/27/2019 9:10 AM
Analysis Date: 03/07/2019
Collected Date: 02/26/2019

Project: COS 276 Fremont (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 411901865-0038	Window Glazing	Gray/Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
6 411901865-0039	Window Caulk	Gray/White Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
9-Shingle 411901865-0040	Shingle & Felt	Gray/Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
9-Tar 411901865-0041	Shingle & Felt	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
9-Felt 411901865-0042	Shingle & Felt	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
12 411901865-0043	Felt under Metal Roof	White/Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
15-Flooring 411901865-0044	Brown Sq. Vinyl Floor & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
15-Mastic 411901865-0045	Brown Sq. Vinyl Floor & Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
18-Floor Tile 411901865-0046	Beige Str. 9" FT & Mastic	Beige Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
18-Mastic 411901865-0047	Beige Str. 9" FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
18-Felt 411901865-0048	Beige Str. 9" FT & Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
21-Floor Tile 411901865-0049	Brown 9" FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
21-Mastic 411901865-0050	Brown 9" FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 03/08/2019 08:12:04



EMSL Analytical, Inc.

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EMSL Order: 411901865

Customer ID: AXEM25

Customer PO:

Project ID: City of Spartanburg

Attention: Rebecca Shultz
Apex Environmental Management
7 Winchester Court
Mauldin, SC 29662

Phone: (864) 404-3210
Fax:
Received Date: 02/27/2019 9:10 AM
Analysis Date: 03/07/2019
Collected Date: 02/26/2019

Project: COS 276 Fremont (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
21-Felt 411901865-0051	Brown 9" FT & Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
24 411901865-0052	Woodgrain Vinyl	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
27-Flooring 411901865-0053	Light Woodgrain Vinyl	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
27-Mastic 411901865-0054	Light Woodgrain Vinyl	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
30-Flooring 411901865-0055	Beige Sq. Pattern Vinyl	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
30-Mastic 411901865-0056	Beige Sq. Pattern Vinyl	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
33-Floor Tile 411901865-0057	Woodgrain Self Adhseive Tile	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
33-Mastic 411901865-0058	Woodgrain Self Adhseive Tile	Clear Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
33-Flooring 411901865-0059	Woodgrain Self Adhseive Tile	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
36-Backing 411901865-0060	Kitchen - 2nd Layer FT & Mastic	Gray Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
36-Mastic 411901865-0061	Kitchen - 2nd Layer FT & Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
36-Floor Tile 411901865-0062	Kitchen - 2nd Layer FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
36-Mastic 411901865-0063	Kitchen - 2nd Layer FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 03/08/2019 08:12:04



EMSL Analytical, Inc.

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

EMSL Order: 411901865
Customer ID: AXEM25
Customer PO:
Project ID: City of Spartanburg

Attention: Rebecca Shultz Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone: (864) 404-3210 Fax: Received Date: 02/27/2019 9:10 AM Analysis Date: 03/07/2019 Collected Date: 02/26/2019
Project: COS 276 Fremont (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
36-Felt 411901865-0064	Kitchen - 2nd Layer FT & Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
39-Mastic 411901865-0065	Bath - 2nd Layer FT & Mastic	Tan Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
39-Floor Tile 411901865-0066	Bath - 2nd Layer FT & Mastic	Beige Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
39-Mastic 411901865-0067	Bath - 2nd Layer FT & Mastic	Brown Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
39-Felt 411901865-0068	Bath - 2nd Layer FT & Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Derrick Young (31)

Lee Plumley, Laboratory Manager
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 03/08/2019 08:12:04



Asbestos Chain of Custody
EMSL Order Number (Lab Use Only):

411901865

Charlotte, NC 28273

PHONE: (704) 525-2205
FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Rebecca Shultz		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: rshultz@apex-ehs.com		Purchase Order:	
Project Name/Number: COS 276 Fremont		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different - If Bill to is Different note instructions in Comments** <i>Third Party Billing requires written authorization from third party</i>			

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.

PCM - Air <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	TEM-Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)
PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Bulk <input checked="" type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5	Soil/Rock/Vermiculite <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking

Filter Pore Size (Air Samples): 0.8µm 0.45µm

Samplers Name: R. Shultz Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1	Window Glazing		2/26/19
2			
3			

Client Sample # (s):	-	Total # of Samples:	50
Relinquished (Client):		Date:	2/26/19
Received (Lab):		Date:	2/27/19
Comments/Special Instructions:	7956 8988 2220		



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Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

411901865

Charlotte, NC 28273
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 #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
4	Window Caulk		
5			
6			
7	Shingle & Felt		
8			
9			
10	Felt under Metal Roof		
11			
12			
13	Brown Sq. Vinyl Floor & Mastic		
14			
15			
16	Beige Str 9" FT & Mastic		
17			
18			
19	Brown 9" FT & Mastic		
20			
21			
22	Woodgrain Vinyl		
23			
24			
25	Light Woodgrain Vinyl		
26, 27			
*Comments/Special Instructions:			



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Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

411901865

Charlotte, NC 28273
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 #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
28	Beige Sq. Pattern Vinyl		
29	↓		
30			
31	Woodgrain Self Adhesive Tile		
32	↓		
33			
34	2 nd Layer FT & Mastie	Kitchen	
35	↓	↓	
36			
37	2 nd Layer FT & Mastie	Bath	
38	↓	↓	
39			
40	Ceiling Texture		
41	↓		
42			
43	Dry wall & Joint Comp.		
44	↓		
45			
48	Plaster		
49	↓		
50			
51			
52	↓		

*Comments/Special Instructions:

SECTION IV
Photographic Log



Photo 1 – 276 Fremont Avenue in Spartanburg, South Carolina



Photo 2 – Roof shingles & felt on the main roof



Photo 3 – Felt under metal side porch roof



Photo 4 – Wooden window glazing



Photo 5 – Wooden window caulk



Photo 6 – Brown square vinyl floor & mastic in the Living room entries, kitchen & bathroom – top layer



Photo 7 – Beige streaked 9" x 9" floor tile with mastic & felt in the right bedroom (single layer); living room & dining room under wood – 2nd layer



Photo 8 – Brown 9" x 9" floor tile with mastic & felt in the left bedroom (single layer); living room & dining room under wood – 2nd layer



Photo 9 – Beige streaked & brown 9" x 9" floor tile in the living room & dining room under wood – 2nd layer

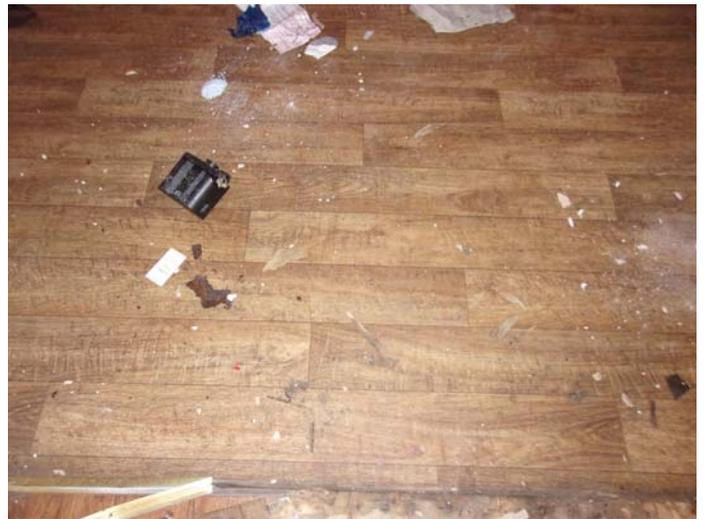


Photo 10 – Wood grain vinyl floor & no mastic in the dining room – top layer

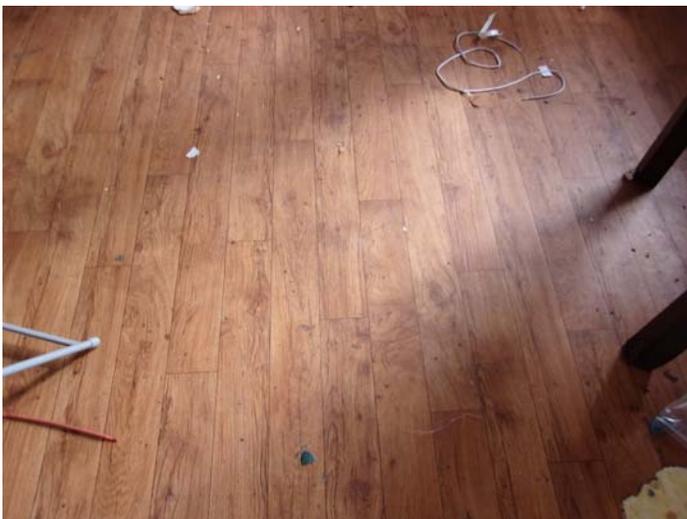


Photo 11 – Light wood grain vinyl floor & mastic in the living room – top layer

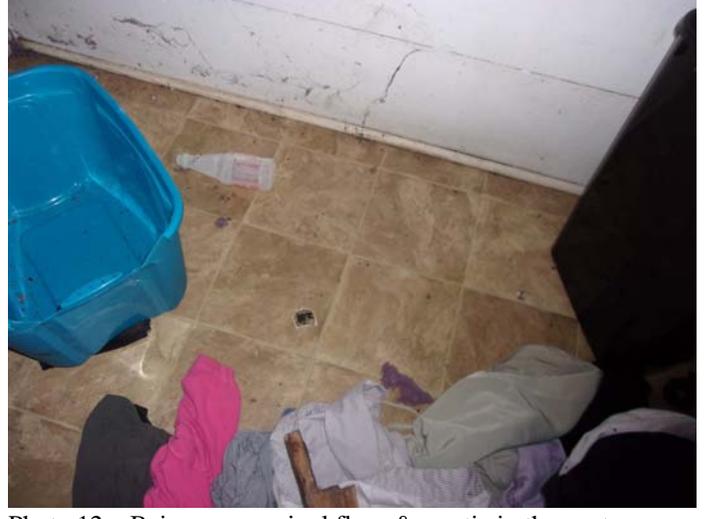


Photo 12 – Beige square vinyl floor & mastic in the pantry over 12" x 12" wood grain pattern self-stick floor tile with mastic over 3rd layer of vinyl floor with no mastic in the pantry



Photo 13 – 9" x 9" floor tile with backing, felt & mastics in the kitchen – 2nd layer



Photo 14 – 9" x 9" floor tile with backing, felt & mastics in the bathroom – 2nd layer



Photo 15 – Ceiling texture in the living room, dining room & left bedroom



Photo 16 – Drywall with joint compound & tape in the living room walls & ceiling



Photo 17 – Drywall with joint compound & tape in the dining room stairway wall & ceiling



Photo 18 – Plaster with finish throughout

SECTION V

SC DHEC Asbestos Inspector License

SCDHEC ISSUED

Asbestos ID Card

Thomas H Oliver



AIRSAMPLER AS-00202
CONSULTBI BI-00680

Expiration Date:

04/04/19

01/18/20