



## **Asbestos Containing Materials Assessment**

159 West Pearl Street  
Spartanburg, South Carolina

***Prepared for:***

Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina

***Prepared by:***

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

Project Number: 0615-124

August 21, 2015





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Mauldin, SC 29662  
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- Moisture Management Plans
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- Environmental Site Assessments
- Hazard Communication

## Apex Project Number 0615-124

August 21, 2015

Ms. Tammie Hoy-Hawkins  
Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina 29303

Reference: Asbestos Containing Materials Assessment Services  
159 West Pearl Street  
Spartanburg, South Carolina

Dear Ms. Hoy-Hawkins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property. Our services were in accordance with Apex's contract dated July 22, 2015.

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 blue ink signature of Tom Oliver, written in a cursive style.

Tom Oliver  
Director of Operations

A blue ink signature of Rebecca W. Shultz, written in a cursive style.

Rebecca W. Shultz, CIH, CSP  
President

Appendices

**ASBESTOS CONTAINING MATERIALS ASSESSMENT**

**NORTHSIDE DEVELOPMENT GROUP  
159 WEST PEARL STREET  
SPARTANBURG, SOUTH CAROLINA**

**APEX PROJECT NO. 0615-124**

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**SECTION I**

**Asbestos Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0615-124**

Date:	8/21/2015	Page Number:	1 of 3
Client:	Northside Development Group	Client Contact:	Ms. Tammie Hoy-Hawkins
Client Address:	410 Magnolia Street Spartanburg, SC 29303	Client Phone Number:	(864) 598-0097
Project:	Asbestos Evaluation		
Property Address:	159 West Pearl Street Spartanburg, SC		
Assessor:	Danny West	Date of Assessment:	8/1/2015
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 85 years
Building Type:	Residential	Number of Stories:	1
Foundation:	Crawlspace	Approximate Square Footage	1,150 SF

**EXTERIOR BUILDING MATERIALS**

- Wooden roof system with shingles & felt paper.
- Window glazing.
- Transite siding with no felt paper beneath.
- Outbuilding exists with roof shingles & no felt paper.

**INTERIOR BUILDING MATERIALS**

- Sheetrock with joint compound.
- Multiple types of linoleum flooring with & without glue.
- Ceiling texture.

## **SCOPE OF THE SURVEY**

The objectives of the asbestos containing materials assessment included the following:

- Identification of suspect asbestos-containing material (ACM) 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.
- Presenting the results in a report identifying confirmed ACMs.

## **METHODS**

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-three (33) bulk samples were collected during the survey and submitted to EMSL in Charlotte, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). CEI 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). Eight (8) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material as a material containing more than one percent asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. Specific *PLM* and *TEM* table is located in Appendix II of this report and identify positive materials and designate approximate quantities.

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

- Approximately 2,160 SF of transite siding on the building exterior.

## **RECOMMENDATIONS AND DISCUSSION**

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

Apex recommends the following:

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

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the structures. Our recommendations are based on the guidelines presented in EPA, State of South Carolina and OSHA asbestos regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for asbestos abatement. If you are planning an asbestos 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. Quantities provided in this report are estimated. Contractors must verify material amounts prior to bidding or removal.

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 space. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Our assessment procedures and recommendations are based on the guidelines presented in EPA, State of South Carolina or OSHA asbestos regulations.

**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 PLM & TEM Data Tables**

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/1/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 159 W. Pearl Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description		Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
1	1	Linoleum	no glue	Kitchen Flooring	NF	M	G	LPD	144 SF	N	NAD	0%
1	2	Linoleum	no glue	Kitchen Flooring	NF	M	G	LPD	"	N	NAD	0%
1	3TEM	Linoleum	no glue	Kitchen Flooring	NF	M	G	LPD	"	N	NAD	0%
2	4a	Linoleum		Bath Room Flooring	NF	M	G	LPD	100 SF	N	NAD	0%
3	4b	Glue		Bath Room Flooring	NF	M	G	LPD	"	N	NAD	0%
2	5a	Linoleum		Bath Room Flooring	NF	M	G	LPD	"	N	NAD	0%
3	5b	Glue		Bath Room Flooring	NF	M	G	LPD	"	N	NAD	0%
2	6aTEM	Linoleum		Bath Room Flooring	NF	M	G	LPD	"	N	NAD	0%
3	6bTEM	Glue		Bath Room Flooring	NF	M	G	LPD	"	N	NAD	0%
4	7	Ceiling Texture		Bath Room	F	S	G	LPD	250 SF	N	NAD	0%
4	8	Ceiling Texture		Kitchen Ceiling	F	S	G	LPD	"	N	NAD	0%
4	9	Ceiling Texture		Kitchen Ceiling	F	S	G	LPD	"	N	NAD	0%
5	10	Sheet Rock		Bath Room	F	S	G	LPD	250 SF	N	NAD	0%
5	11	Sheet Rock		Kitchen Ceiling	F	S	G	LPD	"	N	NAD	0%
5	12	Sheet Rock		Kitchen Ceiling	F	S	G	LPD	"	N	NAD	0%
6	13	Joint Compound		Kitchen Ceiling	F	S	G	LPD	250 SF	N	NAD	0%
6	14	Joint Compound		Kitchen Ceiling	F	S	G	LPD	"	N	NAD	0%
6	15	Joint Compound		Bath Room	F	S	G	LPD	"	N	NAD	0%
7	16	Roof Shingles		Rear of Home	NF	M	G	LPD	2,650 SF	N	NAD	0%
7	17	Roof Shingles		Rear of Home	NF	M	G	LPD	"	N	NAD	0%
7	18TEM	Roof Shingles		Rear of Home	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous A** Indicate samples that fall within a homogenous area with a "{

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

\*\*\*\* **Present Condition**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

G = Localized, limited damage)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

D = 10% distributed and less than 25% localized)

M = Miscellaneous - in a manner sufficient to determine if ACM

SD = Equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

**LABORATORY FINDINGS:**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

<> = **Asbestos Finding**

P = Positive N = Negative

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

<<>> = **type of Asbestos**

Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/1/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 159 W. Pearl Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
8	19	Roof Felt Paper	Rear of Home	NF	M	G	LPD	2,650 SF	N	NAD	0%
8	20	Roof Felt Paper	Rear of Home	NF	M	G	LPD	"	N	NAD	0%
8	21TEM	Roof Felt Paper	Rear of Home	NF	M	G	LPD	"	N	NAD	0%
9	22	Transite Siding	Side of Home	NF	M	G	LPD	2,160 SF	P	Chrysotile	8%
9	23	Transite Siding	Side of Home	NF	M	G	LPD	"	Positive	Stop	8%
9	24	Transite Siding	Side of Home	NF	M	G	LPD	"	Positive	Stop	8%
10	25	Building Shingles	Top Layer of Out Building	NF	M	G	LPD	400 SF	N	NAD	0%
10	26	Building Shingles	Top Layer of Out Building	NF	M	G	LPD	"	N	NAD	0%
10	27TEM	Building Shingles	Top Layer of Out Building	NF	M	G	LPD	"	N	NAD	0%
11	28	Building Shingles	Second Layer of Out Building	NF	M	G	LPD	400 SF	N	NAD	0%
11	29	Building Shingles	Second Layer of Out Building	NF	M	G	LPD	"	N	NAD	0%
11	30TEM	Building Shingles	Second Layer of Out Building	NF	M	G	LPD	"	N	NAD	0%
12	31	Window Glazing	Home Right Side of Home	NF	M	G	LPD	8units 60LF	N	NAD	0%
12	32	Window Glazing	Home Right Side of Home	NF	M	G	LPD	"	N	NAD	0%
12	33TEM	Window Glazing	Home Right Side of Home	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous Area** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

M = Miscellaneous - in a manner sufficient to determine if ACM

\*\*\*\* **Present Condition**

G Localized, limited damage)

D 10% distributed and less than 25% localized)

SD Equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

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PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

**LABORATORY FINDINGS:**

<> **Asbestos Finding**

P = Positive N = Negative

<<>> **Type of Asbestos** Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

**SECTION III**

**Laboratory Analytical Results**



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505316
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 159 W. Pearl St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 411505316-0001	Kitchen - Linoleum No Glue	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
2 411505316-0002	Kitchen - Linoleum No Glue	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
4A 411505316-0003	Bathroom - Linoleum w/ Mastic	Tan Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
4B 411505316-0004	Bathroom - Linoleum w/ Mastic	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
5A 411505316-0005	Bathroom - Linoleum w/ Mastic	Brown/Gray Fibrous Homogeneous	10% Cellulose	5% Ca Carbonate 85% Non-fibrous (other)	None Detected
5B 411505316-0006	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	3% Cellulose	5% Ca Carbonate 92% Non-fibrous (other)	None Detected
7 411505316-0007	Bathroom - Ceiling Texture	Beige Non-Fibrous Homogeneous	<1% Cellulose	5% Mica 20% Ca Carbonate 75% Non-fibrous (other)	None Detected
8 411505316-0008	Kitchen - Ceiling Texture	White/Beige Non-Fibrous Homogeneous		5% Mica 20% Ca Carbonate 75% Non-fibrous (other)	None Detected

Analyst(s)  
 \_\_\_\_\_  
 Aaron Hartley (11)  
 Kristie Elliott (15)

  
 \_\_\_\_\_  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 13:29:42

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505316
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

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Project: 159 W. Pearl St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9 411505316-0009	Kitchen - Ceiling Texture	White/Beige Non-Fibrous Homogeneous		5% Mica 15% Ca Carbonate 80% Non-fibrous (other)	None Detected
10-Sheetrock 411505316-0010	Bathroom - Ceiling Texture	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
Sample does not match COC description					
11-Sheetrock 411505316-0011	Kitchen - Ceiling Texture	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
Sample does not match COC description					
12-Sheetrock 411505316-0012	Kitchen - Ceiling Texture	Brown/White Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
Sample does not match COC description					
13 411505316-0013	Kitchen - Joint Compound	White/Beige Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (other)	None Detected
14 411505316-0014	Kitchen - Joint Compound	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	35% Ca Carbonate 65% Non-fibrous (other)	None Detected
15 411505316-0015	Bathroom - Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (other)	None Detected

Analyst(s)  
 Aaron Hartley (11)  
 Kristie Elliott (15)

  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 13:29:42



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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
16 411505316-0016	- Shingles	Gray/Black Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected
17 411505316-0017	- Shingles	Gray/Black Fibrous Homogeneous	10% Glass	5% Quartz 10% Ca Carbonate 75% Non-fibrous (other)	None Detected
19 411505316-0018	- Felt Paper under Shingles	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	None Detected
20 411505316-0019	- Felt Paper under Shingles	Brown/Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	None Detected
22 411505316-0020	- Transite Siding under Vinyl Siding	Gray/Green Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile
23 411505316-0021	- Transite Siding under Vinyl Siding				Stop Positive (Not Analyzed)
24 411505316-0022	- Transite Siding under Vinyl Siding				Stop Positive (Not Analyzed)
25 411505316-0023	Out Building - Top Layer Shingles	Gray/Black Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected

Analyst(s)  
 Aaron Hartley (11)  
 Kristie Elliott (15)

  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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

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Project: 159 W. Pearl St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
26 411505316-0024	Out Building - Top Layer Shingles	Gray/Black Fibrous Homogeneous	4% Glass	5% Quartz 10% Ca Carbonate 81% Non-fibrous (other)	None Detected
28 411505316-0025	Out Building - Bottom Layer Shingles	Black/Beige Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected
29 411505316-0026	Out Building - Bottom Layer Shingles	Gray/Black Fibrous Homogeneous	5% Glass	8% Quartz 5% Ca Carbonate 82% Non-fibrous (other)	None Detected
31 411505316-0027	Right Hand Side 8 Units - Window Glazing	Tan Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
32 411505316-0028	Right Hand Side 8 Units - Window Glazing	Tan/White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (other)	None Detected

Analyst(s)  
 \_\_\_\_\_  
 Aaron Hartley (11)  
 Kristie Elliott (15)

  
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 Lee Plumley, Laboratory Manager  
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%  
 Samples analyzed by EMSL Analytical, Inc. Charlotte, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from 08/06/2015 13:29:42

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273  
 Phone/Fax: (704) 525-2205 / (704) 525-2382  
<http://www.EMSL.com> [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505316  
 CustomerID: AXEM25  
 CustomerPO:  
 ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/06/15 2:00 PM  
 Analysis Date: 8/10/2015  
 Collected:

Project: 159 W. Pearl St.

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

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
3 411505316-0029	Kitchen - Linoleum No Glue	Tan Non-Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
6A 411505316-0030	Bathroom - Linoleum w/ Mastic	Tan/White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6B 411505316-0031	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	99.7	0.31 Fibrous (other)	No Asbestos Detected
18 411505316-0032	- Shingles	White/Black Fibrous Homogeneous	100	None	No Asbestos Detected
21 411505316-0033	- Felt Paper under Shingles	Black Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
27 411505316-0034	Out Building - Top Layer Shingles	Gray/Black Fibrous Homogeneous	100	<0.52 Fibrous (other)	No Asbestos Detected
30 411505316-0035	Out Building - Bottom Layer Shingles	White/Black Non-Fibrous Homogeneous	100	<0.47 Fibrous (other)	No Asbestos Detected
33 411505316-0036	Right Hand Side 8 Units - Window Glazing	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)  
 Charles Harris (8)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/10/2015 14:47:18

# Asbestos Chain of Custody

## EMSL Order Number (Lab Use Only):

411505316

**EMSL ANALYTICAL, INC.**  
LABORATORY • PRODUCTS • TRAINING

<b>Company : Apex Environmental Management</b>		<b>EMSL-Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
<b>Street: 7 Winchester Place</b>		<i>Third Party Billing requires written authorization from third party</i>	
<b>City: Mauldin</b>	<b>State/Province: SC</b>	<b>Zip/Postal Code:</b>	<b>Country:</b>
<b>Report To (Name): Rebecca Shultz</b>		<b>Fax #:</b>	
<b>Telephone #:</b>		<b>Email Address:</b>	
<b>Project Name/Number: 159 W Pearl</b>		<b>U.S. State Samples Taken: US</b>	
<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		<b>Purchase Order:</b>	

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

3 Hours  
  6 Hours  
  24 Hrs  
  48 Hrs  
  3 Days  
  4 Days  
  5 Days  
  10 Days

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

<p><b>PCM - Air</b></p> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <p><b>PLM - Bulk (reporting limit)</b></p> <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"/> NIOSH 9002 (<1%)	<p><b>TEM - Air</b></p> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <p><b>TEM - Bulk</b></p> <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 <p><b>TEM - Water: EPA 100.2</b></p> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<p><b>TEM - Dust</b></p> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <p><b>Soil/Rock/Vermiculite</b></p> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <p><b>Other:</b></p> <input type="checkbox"/>
---	---	---

**Check For Positive Stop – Clearly Identify Homogenous Group**

<b>Samplers Name:</b> Danny West	<b>Samplers Signature:</b> <i>Daniel E West</i>
----------------------------------	---

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
see attachments			

<b>Client Sample # (s):</b> -	<b>Total # of Samples:</b>	
<b>Relinquished (Client):</b> <i>Daniel E West</i>	<b>Date:</b> <i>8/1/15</i>	<b>Time:</b> <i>1800</i>
<b>Received (Lab):</b> <i>Kyle Nelson</i>	<b>Date:</b> <i>8/1/15</i>	<b>Time:</b> <i>9:50am EMSL FLX</i>
<b>Comments/Special Instructions:</b>		8063 6316 7201

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

411505316

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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
1	linoleum kitchen no glue		144 sq ft
2	" "		
3	" "		
4 atb	" bathroom w/ mastic		100 sq ft
5 atb	" "		
6 atb	" "		
7	ceiling texture bathroom		250 sq ft
8	" " kitchen		
9	" " kitchen		
10	" " bathroom		
11	" " kitchen		
12	" " kitchen		
13	joint compound kitchen		
14	" " kitchen		
15	" " bathroom		
16	shingles	2650 sq ft	

TEM

\*Comments/Special Instructions:

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

411505316

EMSL ANALYTICAL, INC.  
 LABORATORY-PRODUCTS-TRAINING

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
17	shingles	2650 sq ft	
18	"		
19	felt paper under shingles	2650 sq ft	
20	" "		
21	" "		
22	Transite siding unde vinyl siding	2160 sq ft	
23	"		
24	"		
25	top layer shingles out building	18x22	
26	"		
27	"		
28	bottom layer shingles out building	18x22	
29	"		
30	"		
31	window glazing right hand side units	60 lin ft	
32	"		

\*Comments/Special Instructions:



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



Photo 1 – 159 W. Pearl Street.



Photo 2 – Ceiling Tiles.



Photo 3 – Interior Flooring.



Photo 4 – Kitchen Flooring.



Photo 5 – Ceiling Texture.



Photo 6 – Bathroom Flooring.

**SECTION V**

**SC DHEC Asbestos Inspector License**

North Carolina  
Asbestos Accreditation



Rebecca W Shultz  
7 Winchester Ct  
Mauldin, SC 29662

108487

EXPIRATION

06-30-2016

DOB	SEX	HT	WT
09-19-1974	F	5'4"	175
CLASS	#	EXP	
DESIGNER	40465	06-16	
INSPECTOR	12394	06-16	
SUPER AIR MONITOR	90151	08-15	

SCDHEC ISSUED  
Asbestos ID Card

Rebecca Shultz



CONSULTPD  
CONSULTBI

Expires  
PD-00060 06/10/16  
BI-00492 06/09/16



## **Asbestos Containing Materials Assessment**

172 Raindrop Street  
Spartanburg, South Carolina

***Prepared for:***

Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina

***Prepared by:***

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

Project Number: 0615-124

August 21, 2015





7 Winchester Court  
Mauldin, SC 29662  
864.404.3210 office  
864.404.3213 fax  
[www.apex-ehs.com](http://www.apex-ehs.com)

## SERVICES

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

## APEX Project Number 0615-124

August 21, 2015

Ms. Tammie Hoy-Hawkins  
Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina 29303

Reference: Asbestos Containing Materials Assessment Services  
172 Raindrop Street  
Spartanburg, South Carolina

Dear Ms. Hoy-Hawkins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property. Our services were in accordance with Apex's contract dated July 22, 2015.

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  
Director of Operations

Rebecca Shultz, CIH, CSP  
President

Appendices

**ASBESTOS CONTAINING MATERIALS ASSESSMENT**

**NORTHSIDE DEVELOPMENT GROUP  
172 RAINDROP STREET  
SPARTANBURG, SOUTH CAROLINA**

**APEX PROJECT NO. 0615-124**

**TABLE OF CONTENTS**

**SECTION**

- I Asbestos Evaluation Report
- II Asbestos PLM & TEM Data Tables
- III Laboratory Analytical Results
- IV Photographic Log
- V SC DHEC Asbestos Inspector License

**SECTION I**

**Asbestos Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0615-124**

Date:	8/21/2015	Page Number:	1 of 3
Client:	Northside Development Group	Client Contact:	Ms. Tammie Hoy-Hawkins
Client Address:	410 Magnolia Street Spartanburg, SC 29303	Client Phone Number:	(864) 598-0097
Project:	Asbestos Evaluation		
Property Address:	172 Raindrop Street Spartanburg, SC		
Assessor:	Danny West	Date of Assessment:	8/3/2015
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 115 years
Building Type:	Residential Duplex	Number of Stories:	1
Foundation:	Crawlspace	Approximate Square Footage	1,000 SF

**EXTERIOR BUILDING MATERIALS**

- Wooden roof system with shingles & felt paper.
- Transite siding with no felt paper beneath.

**INTERIOR BUILDING MATERIALS**

- Sheetrock with joint compound.
- Multiple types of linoleum flooring with & without glue.
- Ceiling texture.

## **SCOPE OF THE SURVEY**

The objectives of the asbestos containing materials assessment included the following:

- Identification of suspect asbestos-containing material (ACM) 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.
- Presenting the results in a report identifying confirmed ACMs.

## **METHODS**

In order to determine if the suspect materials observed during the visual survey contained asbestos, representative bulk samples were collected and placed in sealed packages. Thirty-one (31) bulk samples were collected during the survey and submitted to EMSL in Charlotte, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). CEI 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). Seven (7) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material as a material containing more than one percent asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. Specific *PLM* and *TEM* table is located in Appendix II of this report and identify positive materials and designate approximate quantities.

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

- Approximately 2,103 SF of transite siding on the building exterior.

## **RECOMMENDATIONS AND DISCUSSION**

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:

Northside Development Group  
172 Raindrop Street  
Apex Project No. 0615-124  
August 21, 2015

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

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the structures. Our recommendations are based on the guidelines presented in EPA, State of South Carolina and OSHA asbestos regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for asbestos abatement. If you are planning an asbestos 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. Quantities provided in this report are estimated. Contractors must verify material amounts prior to bidding or removal.

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 space. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Our assessment procedures and recommendations are based on the guidelines presented in EPA, State of South Carolina or OSHA asbestos regulations.

**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 PLM & TEM Data Tables**

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Address: 410 Magnolia Street, Spartanburg, SC 29303

Site Location/ Bldg. Name/No./ Description Vacant Home - 172 Raindrop Street, Spartanburg South Carolina

Job No. 0615-124

Inspector Name & No.

Date: 8/3/2015

Danny West BI-00655

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
1	1	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	400 SF	N	NAD	0%
1	2	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	"	N	NAD	0%
1	3TEM	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	"	N	NAD	0%
2	4	Linoleum no glue	Bath Room	NF	M	G	LPD	150 SF	N	NAD	0%
2	5	Linoleum no glue	Bath Room	NF	M	G	LPD	"	N	NAD	0%
2	6TEM	Linoleum no glue	Bath Room	NF	M	G	LPD	"	N	NAD	0%
3	7a	Linoleum	Bed Room	NF	M	G	LPD	200 SF	N	NAD	0%
4	7b	Glue	Bed Room	NF	M	G	LPD	"	N	NAD	0%
3	8a	Linoleum	Bed Room	NF	M	G	LPD	"	N	NAD	0%
4	8b	Glue	Bed Room	NF	M	G	LPD	"	N	NAD	0%
3	9aTEM	Linoleum	Bed Room	NF	M	G	LPD	"	N	NAD	0%
4	9bTEM	Glue	Bed Room	NF	M	G	LPD	"	N	NAD	0%
5	10	Linoleum no glue	Right Front Room	NF	M	G	LPD	625 SF	N	NAD	0%
5	11	Linoleum no glue	Right Front Room	NF	M	G	LPD	"	N	NAD	0%
5	12TEM	Linoleum no glue	Right Front Room	NF	M	G	LPD	"	N	NAD	0%
6	13	Sheet Rock	Bath Room	F	S	G	LPD	3,386 SF	N	NAD	0%
6	14	Sheet Rock	Kitchen	F	S	G	LPD	"	N	NAD	0%
6	15	Sheet Rock	Living Room	F	S	G	LPD	"	N	NAD	0%
6	16	Sheet Rock	Right Front Room	F	S	G	LPD	"	N	NAD	0%
6	17	Sheet Rock	Back Porch Room	F	S	G	LPD	"	N	NAD	0%

\* **Homogenous Area** Indicate samples that fall within a homogenous area with a "(")

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

\*\*\*\* **Present Condition**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

G = Localized, limited damage)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

D = 10% distributed and less than 25% localized)

M = Miscellaneous - in a manner sufficient to determine if ACM

SD = Equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

**LABORATORY FINDINGS:**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

<> = **Asbestos Finding**

P = Positive N = Negative

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

<<>> = **Types of Asbestos**

Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 172 Raindrop Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
7	18	Joint Compound	Bath Room	F	S	G	LPD	3,386 SF	N	NAD	0%
7	19	Joint Compound	Kitchen	F	S	G	LPD	"	N	NAD	0%
7	20	Joint Compound	Living Room	F	S	G	LPD	"	N	NAD	0%
7	21	Joint Compound	Right Front Room	F	S	G	LPD	"	N	NAD	0%
7	22	Joint Compound	Back Porch Room	F	S	G	LPD	"	N	NAD	0%
8	23	Transite Siding	Rear of Home	NF	M	G	LPD	2,103 SF	P	Chrysotile	10%
8	24	Transite Siding	Rear of Home	NF	M	G	LPD	"	Positive	Stop	10%
8	25	Transite Siding	Rear of Home	NF	M	G	LPD	"	Positive	Stop	10%
9	26	Roof Shingles	Rear of Home	NF	M	G	LPD	3,000 SF	N	NAD	0%
9	27	Roof Shingles	Rear of Home	NF	M	G	LPD	"	N	NAD	0%
9	28TEM	Roof Shingles	Rear of Home	NF	M	G	LPD	"	N	NAD	0%
10	29	Roof Felt Paper	Rear of Home	NF	M	G	LPD	3,000 SF	N	NAD	0%
10	30	Roof Felt Paper	Rear of Home	NF	M	G	LPD	"	N	NAD	0%
10	31TEM	Roof Felt Paper	Rear of Home	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous Area** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

M = Miscellaneous - in a manner sufficient to determine if ACM

\*\*\*\* **Present Condition**

G = localized, limited damage)

D = 10% distributed and less than 25% localized)

SD = equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

**LABORATORY FINDINGS:**

<> = **Asbestos Finding**

P = Positive N = Negative

<<>> = **Type of Asbestos** Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite, Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

**SECTION III**

**Laboratory Analytical Results**



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505310
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/5/2015  
 Collected:

Project: 172 Raindrop

## 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 411505310-0001	Kitchen - Linoleum No Glue	Gray/Beige Fibrous Homogeneous	2% Glass 20% Cellulose	78% Non-fibrous (other)	None Detected
2 411505310-0002	Kitchen - Linoleum No Glue	Gray/Blue/Beige Fibrous Homogeneous	20% Cellulose 1% Glass	79% Non-fibrous (other)	None Detected
4 411505310-0003	Bathroom - Linoleum No Glue	Gray/Beige Fibrous Homogeneous	2% Glass 20% Cellulose	78% Non-fibrous (other)	None Detected
5 411505310-0004	Bathroom - Linoleum No Glue	Gray/White Fibrous Homogeneous	15% Cellulose 1% Glass	84% Non-fibrous (other)	None Detected
7A 411505310-0005	Bedroom - Linoleum w/ Mastic	Gray/Beige Fibrous Homogeneous	1% Glass 15% Cellulose	84% Non-fibrous (other)	None Detected
7B 411505310-0006	Bedroom - Linoleum w/ Mastic	Brown/Beige Non-Fibrous Homogeneous	3% Cellulose	10% Ca Carbonate 87% Non-fibrous (other)	None Detected
8A 411505310-0007	Bedroom - Linoleum w/ Mastic	Gray/Beige Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (other)	None Detected
8B 411505310-0008	Bedroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	8% Ca Carbonate 92% Non-fibrous (other)	None Detected

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

Aaron Hartley (14)  
Erin Guzowski (11)

Lee Plumley, Laboratory Manager  
or other approved signatory

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

Initial report from 08/06/2015 09:13:19

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505310

CustomerID: AXEM25

CustomerPO:

ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/5/2015  
 Collected:

Project: 172 Raindrop

## 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
10 411505310-0009	Right Front Room - Linoleum No Glue	Gray/Beige Fibrous Homogeneous	2% Glass 15% Cellulose	83% Non-fibrous (other)	None Detected
11 411505310-0010	Right Front Room - Linoleum No Glue	Gray/White Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (other)	None Detected
13 411505310-0011	Bathroom - Sheetrock	Brown/Gray Fibrous Homogeneous	6% Cellulose	94% Non-fibrous (other)	None Detected
14 411505310-0012	Kitchen - Sheetrock	Brown/White Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
15 411505310-0013	Living Room - Sheetrock	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
16 411505310-0014	Right Front Room - Sheetrock	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
17 411505310-0015	Back Porch Room - Sheetrock	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
18 411505310-0016	Bathroom - Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (other)	None Detected

Analyst(s)

Aaron Hartley (14)

Erin Guzowski (11)

Lee Plumley, Laboratory Manager  
or other approved signatory

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

Initial report from 08/06/2015 09:13:19



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505310
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/5/2015 Collected:
Project: 172 Raindrop	

## 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
19 411505310-0017	Kitchen - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (other)	None Detected
20 411505310-0018	Living Room - Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (other)	None Detected
21 411505310-0019	Right Front Room - Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (other)	None Detected
22 411505310-0020	Back Porch Room - Joint Compound	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (other)	None Detected
23 411505310-0021	- Transite Siding under Vinyl Siding	Gray/White Fibrous Homogeneous		5% Ca Carbonate 85% Non-fibrous (other)	10% Chrysotile
24 411505310-0022	- Transite Siding under Vinyl Siding				Stop Positive (Not Analyzed)
25 411505310-0023	- Transite Siding under Vinyl Siding				Stop Positive (Not Analyzed)
26 411505310-0024	- Shingles	Gray/Black Fibrous Homogeneous	10% Glass	5% Quartz 10% Ca Carbonate 75% Non-fibrous (other)	None Detected

Analyst(s)  
 Aaron Hartley (14)  
 Erin Guzowski (11)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 09:13:19

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505310
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/5/2015 Collected:
Project: 172 Raindrop	

### 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
27 411505310-0025	- Shingles	Gray/Black Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected
29 411505310-0026	- Felt Paper under Shingles	Brown/Black Non-Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (other)	None Detected
30 411505310-0027	- Felt Paper under Shingles	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected

Analyst(s)  
 \_\_\_\_\_  
 Aaron Hartley (14)  
 Erin Guzowski (11)

  
 \_\_\_\_\_  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%  
 Samples analyzed by EMSL Analytical, Inc. Charlotte, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from 08/06/2015 09:13:19

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273  
 Phone/Fax: (704) 525-2205 / (704) 525-2382  
<http://www.EMSL.com> [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505310  
 CustomerID: AXEM25  
 CustomerPO:  
 ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/06/15 10:30 AM  
 Analysis Date: 8/10/2015  
 Collected:

Project: 172 Raindrop

**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 411505310-0028	Kitchen - Linoleum No Glue	Beige Non-Fibrous Homogeneous	98.9	1.1 Fibrous (other)	No Asbestos Detected
6 411505310-0029	Bathroom - Linoleum No Glue	Tan/Beige Non-Fibrous Homogeneous	99.2	0.76 Fibrous (other)	No Asbestos Detected
9A 411505310-0030	Bedroom - Linoleum w/ Mastic	Beige Non-Fibrous Homogeneous	98.9	1.1 Fibrous (other)	No Asbestos Detected
9B 411505310-0031	Bedroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	99.6	0.45 Fibrous (other)	No Asbestos Detected
12 411505310-0032	Right Front Room - Linoleum No Glue	Beige Non-Fibrous Homogeneous	99.3	0.71 Fibrous (other)	No Asbestos Detected
28 411505310-0033	- Shingles	Black Fibrous Homogeneous	99.5	0.48 Fibrous (other)	No Asbestos Detected
31 411505310-0034	- Felt Paper under Shingles	Black Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)  
 Charles Harris (7)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/11/2015 08:07:12

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

411505310

EMSL ANALYTICAL, INC.  
LABORATORY-PRODUCTS-TRAINING

Company : Apex Environmental Management		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 7 Winchester Place		Third Party Billing requires written authorization from third party	
City: Mauldin	State/Province: SC	Zip/Postal Code:	Country:
Report To (Name): Rebecca Shultz		Fax #:	
Telephone #:		Email Address:	
Project Name/Number: 172 Raindrop			
Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		Purchase Order:	U.S. State Samples Taken: US

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

3 Hours  
  6 Hours  
  24 Hrs  
  48 Hrs  
  3 Days  
  4 Days  
  5 Days  
  10 Days

\*For TEM Air 3 hours/6 hours, 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.

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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"/> NIOSH 9002 (<1%)	<b>TEM - Air</b> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM- Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <b>Other:</b> <input type="checkbox"/>
---	---	--

**Check For Positive Stop - Clearly Identify Homogenous Group**

Samplers Name: Danny West	Samplers Signature: <i>Daniel E West</i>
---------------------------	--

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
504 attached			

Client Sample # (s):	-	Total # of Samples:
Relinquished (Client): <i>Daniel E West</i>	Date: <i>8/3/15</i>	Time: <i>1900</i>
Received (Lab): <i>Kyle Nelson</i>	Date: <i>8/4/15</i>	Time: <i>9:50AM EMSL Fk</i>
Comments/Special Instructions:		<i>8063 6316 7212</i>

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

172 Raindrop fl  
 1162 sq

411505310

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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
1	linoleum no glue kitchen	20x20	
2	" " "		
3	" " "		
4	" bathroom no glue	150sq ft	
5	"		
6	"		
7 atb	" bedroom w/ mastic	200sq ft	
8 atb	" " "		
9 atb	" " "		
10	" right front room no glue	25x25	
11	" "		
12	" "		
13	sheetrock bathroom		
14	" kitchen		
15	" livingroom		
16	" right front room		

TEM

TEM

TEM

TEM

\*Comments/Special Instructions:

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

411505310

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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
17	sheetrock back porch room		
18	joint compound bathroom		
19	" kitchen		
20	" living room		
21	" right front room		
22	" back porch room		
23	Transite siding under vinyl siding	2103 sq ft	
24	" "		
25	" "		
26	shingles	3000 sq ft	
27	"		
28	"		
29	felt paper under shingles	3000 sq ft	
30	"		
31	"		

TEM

TEM

\*Comments/Special Instructions:

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



Photo 1 –172 Raindrop Street.



Photo 2 – Interior Flooring.



Photo 3 – Drywall.



Photo 4 – Interior flooring



Photo 5 – Interior wood walls and floors



Photo 6 – Rear Porch

**SECTION V**

**SC DHEC Asbestos Inspector License**

North Carolina  
Asbestos Accreditation



Rebecca W Shultz  
7 Winchester Ct  
Mauldin, SC 29662

108487

EXPIRATION

06-30-2016

DOB	SEX	HT	WT
09-19-1974	F	5'4"	175
CLASS	#	EXP	
DESIGNER	40465	06-16	
INSPECTOR	12394	06-16	
SUPER AIR MONITOR	90151	08-15	

SCDHEC ISSUED  
Asbestos ID Card

Rebecca Shultz



CONSULTPD  
CONSULTBI

Expires  
PD-00060 06/10/16  
BI-00492 06/09/16



## **Asbestos Containing Materials Assessment**

225 Milan Street  
Spartanburg, South Carolina

### ***Prepared for:***

Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina

### ***Prepared by:***

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

Project Number: 0615-124

August 21, 2015





7 Winchester Court  
Mauldin, SC 29662  
864.404.3210 office  
864.404.3213 fax  
[www.apex-ehs.com](http://www.apex-ehs.com)

### SERVICES

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

## APEX Project Number 0615-124

August 21, 2015

Ms. Tammie Hoy-Hawkins  
Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina 29303

Reference: Asbestos Containing Materials Assessment Services  
225 Milan Street  
Spartanburg, South Carolina

Dear Ms. Hoy-Hawkins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property. Our services were in accordance with Apex's contract dated July 22, 2015.

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  
Director of Operations

Rebecca Shultz, CIH, CSP  
President

Appendices

**ASBESTOS CONTAINING MATERIALS ASSESSMENT**

**NORTHSIDE DEVELOPMENT GROUP  
225 MILAN STREET  
SPARTANBURG, SOUTH CAROLINA**

**APEX PROJECT NO. 0615-124**

**TABLE OF CONTENTS**

**SECTION**

- I Asbestos Evaluation Report
- II Asbestos PLM & TEM Data Tables
- III Laboratory Analytical Results
- IV Photographic Log
- V SC DHEC Asbestos Inspector License

**SECTION I**

**Asbestos Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0615-124**

Date: 8/21/2015 Page Number: 1 of 3

Client: Northside Development Group  
Client Address: 410 Magnolia Street  
Spartanburg, SC 29303  
Client Contact: Ms. Tammie Hoy-Hawkins  
Client Phone Number: (864) 598-0097

Project: Asbestos Evaluation

Property Address: 225 Milan Street  
Spartanburg, SC

Assessor: Danny West Date of Assessment: 8/3/2015  
Company: Apex Environmental Management  
7 Winchester Court Mauldin, SC 29662  
Phone Number: (864) 404-3210

Purpose of Assessment: Demolition Age of Structure: Approximately 108 years

Building Type: Residential Number of Stories: 1

Foundation: Crawlspace Approximate Square Footage: 1,100 SF

**EXTERIOR BUILDING MATERIALS**

- Metal roof with coating.
- Window glazing.
- Chimney mastic assumed positive.

**INTERIOR BUILDING MATERIALS**

- Sheetrock with joint compound.
- Plaster with skim coat
- Multiple types & layers of linoleum flooring with & without glue.
- 12" x 12" inlay with glue.

## **SCOPE OF THE SURVEY**

The objectives of the asbestos containing materials assessment included the following:

- Identification of suspect asbestos-containing material (ACM) 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.
- Presenting the results in a report identifying confirmed ACMs.

## **METHODS**

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 (30) bulk samples were collected during the survey and submitted to EMSL in Charlotte, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). CEI 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). Seven (7) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material as a material containing more than one percent asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. Specific *PLM* and *TEM* table is located in Appendix II of this report and identify positive materials and designate approximate quantities.

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

- Approximately 2,050 SF of metal roof coating.
- Approximately 1,700 SF of joint compound on sheetrock.

## **RECOMMENDATIONS AND DISCUSSION**

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

Apex recommends the following:

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

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the structures. Our recommendations are based on the guidelines presented in EPA, State of South Carolina and OSHA asbestos regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for asbestos abatement. If you are planning an asbestos 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. Quantities provided in this report are estimated. Contractors must verify material amounts prior to bidding or removal.

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 space. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Our assessment procedures and recommendations are based on the guidelines presented in EPA, State of South Carolina or OSHA asbestos regulations.

**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 PLM & TEM Data Tables**

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 225 Milan Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
1	1	Window Glazing	Front Window	NF	M	G	LPD	8Units 60 LF	N	NAD	0%
1	2	Window Glazing	Left Side Window	NF	M	G	LPD	"	N	NAD	0%
1	3TEM	Window Glazing	Left Side Window	NF	M	G	LPD	"	N	NAD	0%
2	4	Roof Coating	Rear of Home	NF	M	G	LPD	2,050 SF	P	Chrysotile	2%
2	5	Roof Coating	Rear of Home	NF	M	G	LPD	"	Positive	Stop	2%
2	6TEM	Roof Coating	Rear of Home	NF	M	G	LPD	"	Positive	Stop	2%
3	7a	Plaster Skim	Kitchen	F	S	G	LPD	2,560 SF	N	NAD	0%
4	7b	Plaster Rough	Kitchen	F	S	G	LPD	"	N	NAD	0%
3	8a	Plaster Skim	Front Bed Room	F	S	G	LPD	"	N	NAD	0%
4	8b	Plaster Rough	Front Bed Room	F	S	G	LPD	"	N	NAD	0%
3	9a	Plaster Skim	Rear Bed Room	F	S	G	LPD	"	N	NAD	0%
4	9b	Plaster Rough	Rear Bed Room	F	S	G	LPD	"	N	NAD	0%
3	10a	Plaster Skim	Living Room	F	S	G	LPD	"	N	NAD	0%
4	10b	Plaster Rough	Living Room	F	S	G	LPD	"	N	NAD	0%
3	11a	Plaster Skim	Living Room	F	S	G	LPD	"	N	NAD	0%
4	11b	Plaster Rough	Living Room	F	S	G	LPD	"	N	NAD	0%
5	12	Sheet Rock	Kitchen	F	S	G	LPD	1,700 SF	N	NAD	0%
5	13	Sheet Rock	Front Bed Room	F	S	G	LPD	"	N	NAD	0%
5	14	Sheet Rock	Front Bed Room	F	S	G	LPD	"	N	NAD	0%
5	15	Sheet Rock	Living Room	F	S	G	LPD	"	N	NAD	0%
5	16	Sheet Rock	Living Room	F	S	G	LPD	"	N	NAD	0%

\* **Homogenous Area:** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

\*\*\*\* **Present Condition**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

G = Localized, limited damage)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

D = 10% distributed and less than 25% localized)

M = Miscellaneous - in a manner sufficient to determine if ACM

SD = Equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

**LABORATORY FINDINGS:**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

<> = **Asbestos Finding**

P = Positive

N = Negative

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

<<>> = **Type of Asbestos**

Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 225 Milan Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
6	17	Joint Compound	Kitchen	F	S	G	LPD	1,700 SF	Positive	Chrysotile	2%
6	18	Joint Compound	Front Bed Room	F	S	G	LPD	"	Positive	Stop	2%
6	19	Joint Compound	Front Bed Room	F	S	G	LPD	"	Positive	Stop	2%
6	20	Joint Compound	Living Room	F	S	G	LPD	"	Positive	Stop	2%
6	21	Joint Compound	Living Room	F	S	G	LPD	"	Positive	Stop	2%
7	22a	Linoleum	Kitchen Top Layer	NF	M	G	LPD	306 SF	N	NAD	0%
8	22b	Glue	Kitchen Top Layer	NF	M	G	LPD	"	N	NAD	0%
7	23a	Linoleum	Kitchen Top Layer	NF	M	G	LPD	"	N	NAD	0%
8	23b	Glue	Kitchen Top Layer	NF	M	G	LPD	"	N	NAD	0%
7	24aTEM	Linoleum	Kitchen Top Layer	NF	M	G	LPD	"	N	NAD	0%
8	24bTEM	Glue	Kitchen Top Layer	NF	M	G	LPD	"	N	NAD	0%
9	25a	Linoleum	Kitchen Bottom Layer	NF	M	G	LPD	306 SF	N	NAD	0%
10	25b	Glue	Kitchen Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
9	26a	Linoleum	Kitchen Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
10	26b	Glue	Kitchen Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
9	27aTEM	Linoleum	Kitchen Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
10	27bTEM	Glue	Kitchen Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
11	28a	12x12 Inlay	Bath Room	NF	M	G	LPD	30 SF	N	NAD	0%
12	28b	Glue	Bath Room	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous Area:** Indicate samples that fall within a homogenous area with a "{"

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\*\*\*\* **Present Condition**

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SD = equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

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PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

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**LABORATORY FINDINGS:**

<> = **Asbestos Finding**

P = Positive N = Negative

<<>> = **Types of Asbestos**

Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 225 Milan Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
13	29a	12x12 Inlay	Bath Room	NF	M	G	LPD	30 SF cont.	N	NAD	0%
14	29b	Glue	Bath Room	NF	M	G	LPD	"	N	NAD	0%
13	30aTEM	12x12 Inlay	Bath Room	NF	M	G	LPD	"	N	NAD	0%
14	30bTEM	Glue	Bath Room	NF	M	G	LPD	"	N	NAD	0%
<b>ASSUMED</b>	<b>Chimney Mastic</b>		<b>Around Chimney</b>	<b>NF</b>	<b>M</b>	<b>G</b>	<b>LPD</b>	<b>30 LF</b>		<b>ASSUMED</b>	

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Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

**SECTION III**

**Laboratory Analytical Results**



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505311
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/6/2015  
 Collected:

Project: **225 Milan**

## 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 411505311-0001	8 Units - Window Glazing	Gray/Tan Non-Fibrous Homogeneous		50% Ca Carbonate 50% Non-fibrous (other)	<b>None Detected</b>
2 411505311-0002	8 Units - Window Glazing	Gray/Tan Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (other)	<b>None Detected</b>
4 411505311-0003	- Material on Tin Roofing	Black Non-Fibrous Homogeneous		5% Ca Carbonate 93% Non-fibrous (other)	<b>2% Chrysotile</b>
5 411505311-0004	- Material on Tin Roofing				<b>Stop Positive (Not Analyzed)</b>
7A 411505311-0005	Kitchen - Plaster	Gray/Beige Non-Fibrous Homogeneous	1% Fibrous (other)	5% Quartz 5% Ca Carbonate 89% Non-fibrous (other)	<b>None Detected</b>
7B 411505311-0006	Kitchen - Plaster	Beige Non-Fibrous Homogeneous	1% Synthetic 2% Cellulose	30% Quartz 67% Non-fibrous (other)	<b>None Detected</b>
8A 411505311-0007	Front Bedroom - Plaster	Gray/White/Beige Non-Fibrous Homogeneous		5% Quartz 5% Ca Carbonate 90% Non-fibrous (other)	<b>None Detected</b>
8B 411505311-0008	Front Bedroom - Plaster	Beige Fibrous Homogeneous	2% Cellulose	25% Quartz 73% Non-fibrous (other)	<b>None Detected</b>

Analyst(s)  
 Aaron Hartley (18)  
 Kyle Collins (13)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 09:16:58



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505311
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: <b>225 Milan</b>	

## 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
9A 411505311-0009	Rear Bedroom - Plaster	Gray/Beige Non-Fibrous Homogeneous	<1% Cellulose	5% Quartz 5% Ca Carbonate 90% Non-fibrous (other)	None Detected
9B 411505311-0010	Rear Bedroom - Plaster	Beige Fibrous Homogeneous	1% Cellulose 1% Hair	30% Quartz 68% Non-fibrous (other)	None Detected
10A 411505311-0011	Living Room - Plaster	Gray/Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
10B 411505311-0012	Living Room - Plaster	Gray Fibrous Homogeneous	<1% Cellulose <1% Hair	20% Quartz 5% Ca Carbonate 75% Non-fibrous (other)	None Detected
11A 411505311-0013	Living Room - Plaster	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
11B 411505311-0014	Living Room - Plaster	Gray Fibrous Homogeneous	<1% Cellulose <1% Hair	20% Quartz 5% Ca Carbonate 75% Non-fibrous (other)	None Detected
12 411505311-0015	Kitchen - Sheetrock	Brown/White Fibrous Homogeneous	8% Cellulose 1% Glass	91% Non-fibrous (other)	None Detected
13 411505311-0016	Front Bedroom - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected

Analyst(s)  
 Aaron Hartley (18)  
 Kyle Collins (13)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 09:16:58



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EMSL Order:	411505311
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Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: <b>225 Milan</b>	

## 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
14 411505311-0017	Front Bedroom - Sheetrock	Brown/Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
15 411505311-0018	Living Room - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
16 411505311-0019	Living Room - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
17 411505311-0020	Kitchen - Joint Compound	Beige Non-Fibrous Homogeneous		15% Ca Carbonate 83% Non-fibrous (other)	2% Chrysotile
18 411505311-0021	Front Bedroom - Joint Compound				Stop Positive (Not Analyzed)
19 411505311-0022	Front Bedroom - Joint Compound				Stop Positive (Not Analyzed)
20 411505311-0023	Living Room - Joint Compound				Stop Positive (Not Analyzed)
21 411505311-0024	Living Room - Joint Compound				Stop Positive (Not Analyzed)
22A 411505311-0025	- Linoleum Top Layer w/ Mastic	Tan/White Non-Fibrous Homogeneous	5% Glass	95% Non-fibrous (other)	None Detected

Analyst(s)  
 \_\_\_\_\_  
 Aaron Hartley (18)  
 Kyle Collins (13)

  
 \_\_\_\_\_  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/6/2015  
 Collected:

Project: 225 Milan

### 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
22B 411505311-0026	- Linoleum Top Layer w/ Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (other)	None Detected
23A 411505311-0027	- Linoleum Top Layer w/ Mastic	Brown/Tan Fibrous Homogeneous	5% Glass	95% Non-fibrous (other)	None Detected
23B 411505311-0028	- Linoleum Top Layer w/ Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
25A 411505311-0029	- Linoleum Bottom Layer w/ Mastic	Gray Non-Fibrous Homogeneous	2% Synthetic	30% Ca Carbonate 68% Non-fibrous (other)	None Detected
25B 411505311-0030	- Linoleum Bottom Layer w/ Mastic	Clear Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
26A 411505311-0031	- Linoleum Bottom Layer w/ Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected
26B 411505311-0032	- Linoleum Bottom Layer w/ Mastic	Clear Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (other)	None Detected
28A 411505311-0033	- Bathroom Inlay	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (other)	None Detected

Analyst(s)

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Kyle Collins (13)

Lee Plumley, Laboratory Manager  
or other approved signatory

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Initial report from 08/06/2015 09:16:58

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**7 Winchester Court**  
**Mauldin, SC 29662**

Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/6/2015  
 Collected:

Project: 225 Milan

## 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
28B 411505311-0034	- Bathroom Inlay	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (other)	<b>None Detected</b>
29A 411505311-0035	- Bathroom Inlay	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	<b>None Detected</b>
29B 411505311-0036	- Bathroom Inlay	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (other)	<b>None Detected</b>

Analyst(s)

Aaron Hartley (18)

Kyle Collins (13)

Lee Plumley, Laboratory Manager  
or other approved signatory

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Initial report from 08/06/2015 09:16:58

**EMSL Analytical, Inc.**

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<http://www.EMSL.com> [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505311  
 CustomerID: AXEM25  
 CustomerPO:  
 ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/06/15 10:30 AM  
 Analysis Date: 8/10/2015  
 Collected:

Project: **225 Milan**

**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 411505311-0037	8 Units - Window Glazing	White Non-Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
24A 411505311-0038	- Linoleum Top Layer w/ Mastic	Tan/White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
24B 411505311-0039	- Linoleum Top Layer w/ Mastic	Tan Non-Fibrous Homogeneous	100	<0.57 Fibrous (other)	No Asbestos Detected
27A 411505311-0040	- Linoleum Bottom Layer w/ Mastic	Gray/Black Non-Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
27B 411505311-0041	- Linoleum Bottom Layer w/ Mastic	Clear Non-Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
30A 411505311-0042	- Bathroom Inlay	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
30B 411505311-0043	- Bathroom Inlay	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)  
 Charles Harris (7)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/11/2015 08:07:43



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

225 Milan

1024 sq ft

411505311

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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

T2M  
T2M

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1	window glazing 8 units	60 ln ft	
2	"		
3	"		
4	material on tin roofing	<del>2560 sq ft</del>	
5	"		
6	"		
7 atb	Plaster kitchen	2560 sq ft	
8 atb	" front bedroom		
9 atb	" rear bedroom		
10 atb	" living room		
11 atb	" living room		
12	sheetrock kitchen	1700 sq ft	
13	" front bedroom		
14	" front bedroom		
15	" living room		
16	" living room		

\*Comments/Special Instructions:

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

1024 sq ft

411505311

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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
17	joint compound kitchen		
18	" front bedroom		
19	" front bedroom		
20	" living room		
21	" living room		
22 atb	linoleum top layer w/ mastic	306 sq ft	
23 atb	" "		
24 atb	" "		
25 atb	" bottom layer w/ mastic	306 sq ft	
26 atb	" "		
27 atb	" "		
28 atb	bathroom inlay	12x12	
29 atb	"		
30 atb	"		

TEM

TEM

TEM

\*Comments/Special Instructions:

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



Photo 1 –25 Milan Street.



Photo 2 – Interior Flooring.



Photo 3 – Plaster.

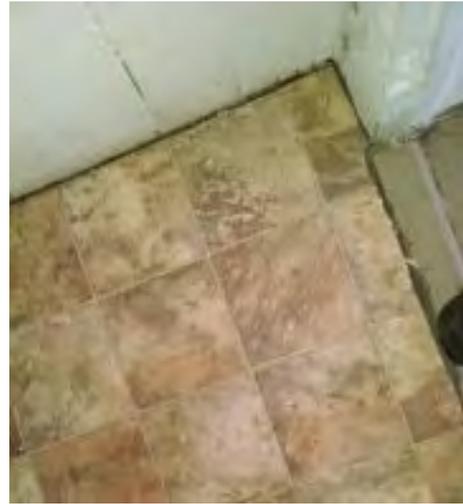


Photo 4 – Interior flooring



Photo 5 – Drywall over plasters



Photo 6 – Windows with glazing.

**SECTION V**

**SC DHEC Asbestos Inspector License**

North Carolina  
Asbestos Accreditation



Rebecca W Shultz  
7 Winchester Ct  
Mauldin, SC 29662

108487

EXPIRATION

06-30-2016

DOB	SEX	HT	WT
09-19-1974	F	5'4"	175
CLASS	#	EXP	
DESIGNER	40465	06-16	
INSPECTOR	12394	06-16	
SUPER AIR MONITOR	90151	08-15	

SCDHEC ISSUED  
Asbestos ID Card

Rebecca Shultz



CONSULTPD  
CONSULTBI

Expires

PD-00060 06/10/16  
BI-00492 06/09/16



## **Asbestos Containing Materials Assessment**

557 Vernon Street  
Spartanburg, South Carolina

***Prepared for:***

Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina

***Prepared by:***

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

Project Number: 0615-124

August 21, 2015





**Apex Project Number 0615-124**

August 21, 2015

7 Winchester Court  
Mauldin, SC 29662  
864.404.3210 office  
864.404.3213 fax  
[www.apex-ehs.com](http://www.apex-ehs.com)

Ms. Tammie Hoy-Hawkins  
Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina 29303

Reference: Asbestos Containing Materials Assessment Services  
557 Vernon Street  
Spartanburg, South Carolina

**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 Ms. Hoy-Hawkins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property. Our services were in accordance with Apex's contract dated July 22, 2015.

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".

Tom Oliver  
Director of Operations

A handwritten signature in blue ink, appearing to read "Rebecca W. Shultz".

Rebecca W. Shultz, CIH, CSP  
President

Appendices

**ASBESTOS CONTAINING MATERIALS ASSESSMENT**

**NORTHSIDE DEVELOPMENT GROUP  
557 VERNON STREET  
SPARTANBURG, SOUTH CAROLINA**

**APEX PROJECT NO. 0615-124**

**TABLE OF CONTENTS**

**SECTION**

- I Asbestos Evaluation Report
- II Asbestos PLM & TEM Data Tables
- III Laboratory Analytical Results
- IV Photographic Log
- V SC DHEC Asbestos Inspector License

**SECTION I**

**Asbestos Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0615-124**

Date:	8/21/2015	Page Number:	1 of 3
Client:	Northside Development Group	Client Contact:	Ms. Tammie Hoy-Hawkins
Client Address:	410 Magnolia Street Spartanburg, SC 29303	Client Phone Number:	(864) 598-0097
Project:	Asbestos Evaluation		
Property Address:	557 Vernon Street Spartanburg, SC		
Assessor:	Danny West	Date of Assessment:	8/3/2015
Company:	Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	Phone Number	(864) 404-3210
Purpose of Assessment:	Demolition	Age of Structure:	Approximately 85 years
Building Type:	Residential	Number of Stories:	1
Foundation:	Crawlspace	Approximate Square Footage	950 SF

**EXTERIOR BUILDING MATERIALS**

- Metal roof with Kool Seal.
- Window glazing.

**INTERIOR BUILDING MATERIALS**

- Sheetrock with joint compound.
- Plaster with skim coat.
- 12" x 12" interlock ceiling tiles with no glue.
- Multiple types & layers of linoleum flooring with glue.
- Ceiling texture.

## **SCOPE OF THE SURVEY**

The objectives of the asbestos containing materials assessment included the following:

- Identification of suspect asbestos-containing material (ACM) 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.
- Presenting the results in a report identifying confirmed ACMs.

## **METHODS**

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-seven (37) bulk samples were collected during the survey and submitted to EMSL in Charlotte, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). CEI 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). Five (5) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material as a material containing more than one percent asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. Specific *PLM* and *TEM* table is located in Appendix II of this report and identify positive materials and designate approximate quantities.

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

- Approximately 1,020 SF of joint compound on sheetrock throughout the structure.
- Approximately 60 SF of linoleum with no glue in the back porch.

## **RECOMMENDATIONS AND DISCUSSION**

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

Apex recommends the following:

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

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the structures. Our recommendations are based on the guidelines presented in EPA, State of South Carolina and OSHA asbestos regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for asbestos abatement. If you are planning an asbestos 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. Quantities provided in this report are estimated. Contractors must verify material amounts prior to bidding or removal.

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 space. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Our assessment procedures and recommendations are based on the guidelines presented in EPA, State of South Carolina or OSHA asbestos regulations.

**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 PLM & TEM Data Tables**

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group  
 Address: 410 Magnolia Street, Spartanburg, SC 29303  
 Site Location/ Bldg. Name/No./ Description

Job No. 0615-124  
 Inspector Name & No.  
 Vacant Home - 557 Vernon Street, Spartanburg South Carolina

Date: 8/3/2015  
 Danny West BI-00655

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
1	1a	Plaster Skim	Right Front Room Walls and Ceilings	F	S	G	LPD	520 SF	N	NAD	0%
2	1b	Plaster Rough	Right Front Room Walls and Ceilings	F	S	G	LPD	"	N	NAD	0%
1	2a	Plaster Skim	Right Front Room Walls and Ceilings	F	S	G	LPD	"	N	NAD	0%
2	2b	Plaster Rough	Right Front Room Walls and Ceilings	F	S	G	LPD	"	N	NAD	0%
1	3a	Plaster Skim	Left Front Room Walls and Ceilings	F	S	G	LPD	"	N	NAD	0%
2	3b	Plaster Rough	Left Front Room Walls and Ceilings	F	S	G	LPD	"	N	NAD	0%
3	4	12X12 Ceiling Inter.	Right Front Room	F	M	G	LPD	820 SF	N	NAD	0%
3	5	12X12 Ceiling Inter.	Left Front Room	F	M	G	LPD	"	N	NAD	0%
3	6	12X12 Ceiling Inter.	Kitchen	F	M	G	LPD	"	N	NAD	0%
4	7	Sheet Rock	Kitchen	F	S	G	LPD	1,020 SF	N	NAD	0%
4	8	Sheet Rock	Center Left Room	F	S	G	LPD	"	N	NAD	0%
4	9	Sheet Rock	Center Left Room	F	S	G	LPD	"	N	NAD	0%
4	10	Sheet Rock	Bath Room	F	S	G	LPD	"	N	NAD	0%
4	11	Sheet Rock	Room Beside Bath Room	F	S	G	LPD	"	N	NAD	0%
5	12	Joint Compound	Kitchen Front Wall	F	S	G	LPD	1,020 SF	P	Chrysotile	2%
5	13	Joint Compound	Kitchen Left Wall	F	S	G	LPD	"	Positive	Stop	2%
5	14	Joint Compound	Bath Room	F	S	G	LPD	"	Positive	Stop	2%
5	15	Joint Compound	Room Beside Bath Room	F	S	G	LPD	"	Positive	Stop	2%
5	16	Joint Compound	Center Left Room	F	S	G	LPD	"	Positive	Stop	2%

\* **Homogenous A** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable** F = Friable NF = Nonfriable

\*\*\* **Category**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)  
 T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)  
 M = Miscellaneous - in a manner sufficient to determine if ACM

\*\*\*\* **Present Condition**

G = localized, limited damage)  
 D = 10% distributed and less than 25% localized)  
 SD = al to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)  
 PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)  
 PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

**LABORATORY FINDINGS:**

<> = **Asbestos Finding** P = Positive N = Negative  
 <<>> = **of Asbestos** Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite, Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group  
 Address: 410 Magnolia Street, Spartanburg, SC 29303  
 Site Location/ Bldg. Name/No./ Description

Job No. 0615-124  
 Inspector Name & No.  
 Vacant Home - 557 Vernon Street, Spartanburg South Carolina

Date: 8/3/2015  
 Danny West BI-00655

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
6	17	Linoleum no glue	Kitchen	NF	M	G	LPD	120 SF	N	NAD	0%
6	18	Linoleum no glue	Kitchen	NF	M	G	LPD	"	N	NAD	0%
6	19TEM	Linoleum no glue	Kitchen	NF	M	G	LPD	"	N	NAD	0%
7	20	Linoleum no glue	Back Porch	NF	M	G	LPD	60 SF	P	Chrysotile	10%
7	21	Linoleum no glue	Back Porch	NF	M	G	LPD	"	Positive	Stop	10%
7	22TEM	Linoleum no glue	Back Porch	NF	M	G	LPD	"	Positive	Stop	10%
8	23	Linoleum no glue	Room Beside bath Room Top Layer	NF	M	G	LPD	60 SF	P	Chrysotile	8%
8	24	Linoleum no glue	Room Beside bath Room Top Layer	NF	M	G	LPD	"	Positive	Stop	8%
8	25TEM	Linoleum no glue	Room Beside bath Room Top Layer	NF	M	G	LPD	"	Positive	Stop	8%
9	26	Linoleum no glue	Room Beside bath Room Bottom Layer	NF	M	G	LPD	60 SF	N	NAD	0%
9	27	Linoleum no glue	Room Beside bath Room Bottom Layer	NF	M	G	LPD	"	N	NAD	0%
9	28TEM	Linoleum no glue	Room Beside bath Room Bottom Layer	NF	M	G	LPD	"	N	Trace	>1%
10	29a	Linoleum	BathRoom	NF	M	G	LPD	64 SF	N	NAD	0%
11	29b	Glue	BathRoom	NF	M	G	LPD	"	N	NAD	0%
10	30a	Linoleum	BathRoom	NF	M	G	LPD	"	N	NAD	0%
11	30b	Glue	BathRoom	NF	M	G	LPD	"	N	NAD	0%
10	31aTEM	Linoleum	BathRoom	NF	M	G	LPD	"	N	NAD	0%
11	31bTEM	Glue	BathRoom	NF	M	G	LPD	"	N	NAD	0%
12	32	Window Glazing	Left Front Room	NF	M	G	LPD	8units 40lf ea	N	NAD	0%
12	33	Window Glazing	Right front Room	NF	M	G	LPD	"	N	NAD	0%
12	34	Window Glazing	Kitchen	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous A** Indicate samples that fall within a homogenous area with a "{}"

\*\* **Friable/Nonfriable**

F = Friable      NF = Nonfriable

\*\*\* **Category**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)  
 T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)  
 M = Miscellaneous - in a manner sufficient to determine if ACM

\*\*\*\* **Present Condition**

G = localized, limited damage)  
 D = 10% distributed and less than 25% localized)  
 SD = equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)  
 PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)  
 PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

**LABORATORY FINDINGS:**

<> = **Asbestos Finding**      P = Positive      N = Negative  
 <<>> = **type of Asbestos**      Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,  
 Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description

Vacant Home - 557 Vernon Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
13	35	Kool Seal	Material Applied to Tin Roof	NF	M	D	PD	1,550 SF	<b>P</b>	<b>Chrysotile</b>	<b>2%</b>
13	36	Kool Seal	Material Applied to Tin Roof	NF	M	D	PD	"	<b>Positive</b>	<b>Stop</b>	<b>2%</b>
13	37TEM	Kool Seal	Material Applied to Tin Roof	NF	M	D	PD	"	<b>Positive</b>	<b>Stop</b>	<b>2%</b>

**\* Homogenous Area** Indicate samples that fall within a homogenous area with a "{"

**\*\* Friable/Nonfriable** F = Friable NF = Nonfriable

**\*\*\* Category**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

M = Miscellaneous - in a manner sufficient to determine if ACM

**\*\*\*\* Present Condition**

G = localized, limited damage)

D = 10% distributed and less than 25% localized)

SD = al to or less than 10% distributed / 25% localized)

**\*\*\*\*\* Potential For Future Disturbance**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

**LABORATORY FINDINGS:**

<> = **Asbestos Finding** P = Positive N = Negative

<<>> = **Asbestos** Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite, Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

**SECTION III**

**Laboratory Analytical Results**



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505319
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 557 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1A 411505319-0001	Right Front - Plaster Skim & Rough Coat	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
1B 411505319-0002	Right Front - Plaster Skim & Rough Coat	Brown/Tan Fibrous Homogeneous	<1% Cellulose	25% Quartz 5% Ca Carbonate 70% Non-fibrous (other)	None Detected
2A 411505319-0003	Ceiling Right Front - Plaster Skim & Rough Coat	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
2B 411505319-0004	Ceiling Right Front - Plaster Skim & Rough Coat	Brown/Tan Fibrous Homogeneous	<1% Cellulose	30% Quartz 5% Ca Carbonate 65% Non-fibrous (other)	None Detected
3A 411505319-0005	Walls Left Front - Plaster Skim & Rough Coat	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (other)	None Detected
3B 411505319-0006	Walls Left Front - Plaster Skim & Rough Coat	Tan Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 5% Ca Carbonate 65% Non-fibrous (other)	None Detected
4 411505319-0007	Right Front Room - 12x12 Interlock Ceiling Tiles	Brown/White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected

Analyst(s)  
 Erin Guzowski (18)  
 Kristie Elliott (10)

Lee Plumley, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%  
 Samples analyzed by EMSL Analytical, Inc. Charlotte, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from 08/06/2015 15:08:04



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505319
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 557 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5 411505319-0008	Left Front Room - 12x12 Interlock Ceiling Tiles	Brown/White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
6 411505319-0009	Kitchen - 12x12 Interlock Ceiling Tiles	Brown/White Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (other)	None Detected
7 411505319-0010	Kitchen - Sheetrock	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
8 411505319-0011	Center Left Room - Sheetrock	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
9 411505319-0012	Center Left Room - Sheetrock	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
10 411505319-0013	Bathroom - Sheetrock	Brown/Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
11 411505319-0014	Room beside Bathroom - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
12 411505319-0015	Kitchen Front Wall - Joint Compound	Tan Non-Fibrous Homogeneous		20% Ca Carbonate 78% Non-fibrous (other)	2% Chrysotile
13 411505319-0016	Kitchen Left Wall - Joint Compound				Stop Positive (Not Analyzed)

Analyst(s)  
 Erin Guzowski (18)  
 Kristie Elliott (10)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 15:08:04



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505319
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 557 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
14 411505319-0017	Bathroom - Joint Compound				Stop Positive (Not Analyzed)
15 411505319-0018	Room beside Bathroom - Joint Compound				Stop Positive (Not Analyzed)
16 411505319-0019	Left Center Room - Joint Compound				Stop Positive (Not Analyzed)
17 411505319-0020	Kitchen - Linoleum No Glue	Gray Fibrous Homogeneous	15% Cellulose 1% Glass	84% Non-fibrous (other)	None Detected
18 411505319-0021	Kitchen - Linoleum No Glue	Gray/Tan Fibrous Homogeneous	15% Cellulose 1% Glass	84% Non-fibrous (other)	None Detected
20 411505319-0022	Back Porch - Linoleum No Glue	Brown/Gray/Tan Fibrous Homogeneous	3% Cellulose	87% Non-fibrous (other)	10% Chrysotile
21 411505319-0023	Back Porch - Linoleum No Glue				Stop Positive (Not Analyzed)
23 411505319-0024	Room beside Bathroom - Linoleum Top Layer No Glue	Gray/White Fibrous Homogeneous	3% Cellulose	89% Non-fibrous (other)	8% Chrysotile

Analyst(s)  
 Erin Guzowski (18)  
 Kristie Elliott (10)

  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 15:08:04



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505319
CustomerID:	AXEM25
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Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 557 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
24 411505319-0025	Room beside Bathroom - Linoleum Top Layer No Glue				Stop Positive (Not Analyzed)
26 411505319-0026	Room beside Bathroom - Linoleum Bottom Layer No Glue	Gray/Red Fibrous Homogeneous	15% Cellulose 3% Synthetic	82% Non-fibrous (other)	None Detected
27 411505319-0027	Room beside Bathroom - Linoleum Bottom Layer No Glue	Gray/Red Fibrous Homogeneous	15% Cellulose 3% Synthetic	82% Non-fibrous (other)	None Detected
29A 411505319-0028	Bathroom - Linoleum w/ Mastic	Gray/Tan/White Fibrous Homogeneous	10% Cellulose 2% Synthetic 1% Glass	87% Non-fibrous (other)	None Detected
29B 411505319-0029	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
30A 411505319-0030	Bathroom - Linoleum w/ Mastic	Gray/Tan Fibrous Homogeneous	10% Cellulose 2% Synthetic 1% Glass	87% Non-fibrous (other)	None Detected
30B 411505319-0031	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected

Analyst(s)  
 Erin Guzowski (18)  
 Kristie Elliott (10)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 15:08:04

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505319

CustomerID: AXEM25

CustomerPO:

ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/04/15 9:50 AM  
 Analysis Date: 8/6/2015  
 Collected:

Project: 557 Vernon St.

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
32 411505319-0032	8 Units - Window Glazing	Gray/Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	<b>None Detected</b>
33 411505319-0033	8 Units - Window Glazing	Gray/Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	<b>None Detected</b>
35 411505319-0034	- Koolsill on Tin Roof	Gray/Black/Silver Non-Fibrous Homogeneous		98% Non-fibrous (other)	<b>2% Chrysotile</b>
36 411505319-0035	- Koolsill on Tin Roof				<b>Stop Positive (Not Analyzed)</b>

Analyst(s)

Erin Guzowski (18)Kristie Elliott (10)

Lee Plumley, Laboratory Manager  
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

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

Initial report from 08/06/2015 15:08:04

**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273  
 Phone/Fax: (704) 525-2205 / (704) 525-2382  
<http://www.EMSL.com> [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505319  
 CustomerID: AXEM25  
 CustomerPO:  
 ProjectID:

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

Phone: (864) 640-5274  
 Fax:  
 Received: 08/06/15 3:45 PM  
 Analysis Date: 8/11/2015  
 Collected:

Project: **557 Vernon St.**

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

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
19 411505319-0036	Kitchen - Linoleum No Glue	Brown/White Non-Fibrous Homogeneous	100	<0.1 Fibrous (other)	No Asbestos Detected
28 411505319-0037	Room beside Bathroom - Linoleum Bottom Layer No Glue	Gray/Red Non-Fibrous Homogeneous	100	None	<0.1% Chrysotile
31A 411505319-0038	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
31B 411505319-0039	Bathroom - Linoleum w/ Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
34 411505319-0040	8 Units - Window Glazing	White Non-Fibrous Homogeneous	99.9	0.14 Fibrous (other)	No Asbestos Detected

Analyst(s)  
 Aaron Hartley (5)

Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/11/2015 12:23:31

# Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

411505319

EMSL ANALYTICAL, INC.  
LABORATORY-PRODUCTS-TRAINING

<b>Company : Apex Environmental Management</b>		<b>EMSL-Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
<b>Street: 7 Winchester Place</b>		<i>Third Party Billing requires written authorization from third party</i>	
<b>City: Mauldin</b>	<b>State/Province: SC</b>	<b>Zip/Postal Code:</b>	<b>Country:</b>
<b>Report To (Name): Rebecca Shultz</b>		<b>Fax #:</b>	
<b>Telephone #:</b>		<b>Email Address:</b>	
<b>Project Name/Number: 557 Vernon St</b>			
<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email		<b>Purchase Order:</b>	<b>U.S. State Samples Taken: US</b>

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

3 Hours  
  6 Hours  
  24 Hrs  
  48 Hrs  
  3 Days  
  4 Days  
  5 Days  
  10 Days

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

<p><b>PCM - Air</b></p> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <p><b>PLM - Bulk (reporting limit)</b></p> <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"/> NIOSH 9002 (<1%)	<p><b>TEM - Air</b></p> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <p><b>TEM - Bulk</b></p> <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 <p><b>TEM - Water: EPA 100.2</b></p> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<p><b>TEM- Dust</b></p> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <p><b>Soil/Rock/Vermiculite</b></p> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <p><b>Other:</b></p> <input type="checkbox"/>
---	---	--

**Check For Positive Stop – Clearly Identify Homogenous Group**

<b>Samplers Name:</b> Danny West	<b>Samplers Signature:</b> <i>Daniel E West</i>
----------------------------------	---

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
see attached			

<b>Client Sample # (s):</b> -	<b>Total # of Samples:</b>
<b>Relinquished (Client):</b> <i>Daniel E West</i>	<b>Date:</b> 8/3/15 <b>Time:</b> 1900
<b>Received (Lab):</b> <i>Kyle Nelson</i>	<b>Date:</b> 8/4/15 <b>Time:</b> 9:50 AM EMSL FLX
<b>Comments/Special Instructions:</b> 8063 6316 7201	

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

557 Vernon St  
 1050 sq ft

411505319

EMSL ANALYTICAL, INC.  
 LABORATORY • PRODUCTS • TRAINING

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
1 a+b	Plaster skim + rough coat right front	520 sq ft	
2 a+b	" " ceiling right front		
3 a+b	" " walls left front		
4	12x12 interlock ceiling tiles right front	820 sq ft	
5	" " left front room		
6	" " kitchen	1020 sq ft	
7	Sheetrock kitchen		
8	" center left room		
9	" "		
10	" bathroom		
11	" room beside bathroom		
12	joint compound kitchen front wall		
13	" kitchen left wall		
14	" bathroom		
15	room beside bathroom		
16	" left center room		

\*Comments/Special Instructions:

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

411505319

EMSL ANALYTICAL, INC.  
 LABORATORY PRODUCTS TRAINING

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
17	linoleum kitchen no glue	60 sq ft	
18	" "		
19	" "		
20	" back porch no glue	60 sq ft	
21	" " "		
22	" " "		
23	" no glue top layer room beside bathroom	60 sq ft	
24	" " "		
25	" " "		
26	" no glue bottom layer room beside bath	60 sq ft	
27	" " "		
28	" " "		
29 a+b	" bathroom w/ mastic	64 sq ft	
30 a+b	" bathroom "		
31 a+b	" " "		
32	window glazing 8 units	40 lin ft	

TEM

TEM

TEM

TEM

TEM

\*Comments/Special Instructions:



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



Photo 1 –557 Vernon Street.



Photo 2 – Interior Flooring.



Photo 3 – PLaster.



Photo 4 – Interior flooring



Photo 5 – Ceiling tiles



Photo 6 – Interior flooring



Photo 7 –Paneling, no drywall beneath.



Photo 8 – Window glazing.

**SECTION V**

**SC DHEC Asbestos Inspector License**

North Carolina  
Asbestos Accreditation



Rebecca W Shultz  
7 Winchester Ct  
Mauldin, SC 29662

108487

EXPIRATION

06-30-2016

DOB	SEX	HT	WT
09-19-1974	F	5'4"	175
CLASS	#	EXP	
DESIGNER	40465	06-16	
INSPECTOR	12394	06-16	
SUPER AIR MONITOR	90151	08-15	

SCDHEC ISSUED  
Asbestos ID Card

Rebecca Shultz



CONSULTPD  
CONSULTBI

Expires

PD-00060 06/10/16  
BI-00492 06/09/16



## **Asbestos Containing Materials Assessment**

579 Vernon Street  
Spartanburg, South Carolina

***Prepared for:***

Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina

***Prepared by:***

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

Project Number: 0615-124

August 21, 2015





7 Winchester Court  
Mauldin, SC 29662  
864.404.3210 office  
864.404.3213 fax  
[www.apex-ehs.com](http://www.apex-ehs.com)

### SERVICES

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

## Apex Project Number 0615-124

August 21, 2015

Ms. Tammie Hoy-Hawkins  
Northside Development Group  
410 Magnolia Street  
Spartanburg, South Carolina 29303

Reference: Asbestos Containing Materials Assessment Services  
579 Vernon Street  
Spartanburg, South Carolina

Dear Ms. Hoy-Hawkins:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property. Our services were in accordance with Apex's contract dated July 22, 2015.

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 blue ink signature of Tom Oliver, written in a cursive style.

Tom Oliver  
Director of Operations

A blue ink signature of Rebecca W. Shultz, written in a cursive style.

Rebecca W. Shultz, CIH, CSP  
President

Appendices

**ASBESTOS CONTAINING MATERIALS ASSESSMENT**

**NORTHSIDE DEVELOPMENT GROUP  
579 VERNON STREET  
SPARTANBURG, SOUTH CAROLINA**

**APEX PROJECT NO. 0615-124**

**TABLE OF CONTENTS**

**SECTION**

- I Asbestos Evaluation Report
- II Asbestos PLM & TEM Data Tables
- III Laboratory Analytical Results
- IV Photographic Log
- V SC DHEC Asbestos Inspector License

**SECTION I**

**Asbestos Evaluation Report**

**ASBESTOS EVALUATION REPORT**  
**APEX PROJECT NUMBER: 0615-124**

Date: 8/21/2015 Page Number: 1 of 3

Client: Northside Development Group  
Client Address: 410 Magnolia Street  
Spartanburg, SC 29303  
Client Contact: Ms. Tammie Hoy-Hawkins  
Client Phone Number: (864) 598-0097

Project: Asbestos Evaluation

Property Address: 579 Vernon Street  
Spartanburg, SC

Assessor: Danny West Date of Assessment: 8/3/2015  
Company: Apex Environmental Management  
7 Winchester Court Mauldin, SC 29662  
Phone Number: (864) 404-3210

Purpose of Assessment: Demolition Age of Structure: Approximately 75 years

Building Type: Residential Number of Stories: 1

Foundation: Crawlspace Approximate Square Footage: 750 SF

**EXTERIOR BUILDING MATERIALS**

- Wooden roof system with shingles & felt paper.
- Window glazing.

**INTERIOR BUILDING MATERIALS**

- Sheetrock with joint compound.
- Multiple types of linoleum flooring with no glue.

## **SCOPE OF THE SURVEY**

The objectives of the asbestos containing materials assessment included the following:

- Identification of suspect asbestos-containing material (ACM) 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.
- Presenting the results in a report identifying confirmed ACMs.

## **METHODS**

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. Twenty-five (25) bulk samples were collected during the survey and submitted to EMSL in Charlotte, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). CEI 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). Four (4) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material as a material containing more than one percent asbestos. Provided below is a general discussion of the asbestos containing materials identified in the residence. Specific *PLM* and *TEM* table is located in Appendix II of this report and identify positive materials and designate approximate quantities.

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

- Approximately 10 units/40 LF of window glazing on the exterior windows.

## **RECOMMENDATIONS AND DISCUSSION**

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

Apex recommends the following:

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

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed in the structures. Our recommendations are based on the guidelines presented in EPA, State of South Carolina and OSHA asbestos regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for asbestos abatement. If you are planning an asbestos 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. Quantities provided in this report are estimated. Contractors must verify material amounts prior to bidding or removal.

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 space. Additional ACM may exist (undetected) in other areas due to their inaccessibility or due to the limited nature of our testing. Our assessment procedures and recommendations are based on the guidelines presented in EPA, State of South Carolina or OSHA asbestos regulations.

**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 PLM & TEM Data Tables**

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 579 Vernon Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
1	1	Sheet Rock	Front Room on Left	F	S	G	LPD	2,434 SF	N	NAD	0%
1	2	Sheet Rock	Middle Room on Left	F	S	G	LPD	"	N	NAD	0%
1	3	Sheet Rock	Rear Room on Left	F	S	G	LPD	"	N	NAD	0%
1	4	Sheet Rock	Rear Room on Right	F	S	G	LPD	"	N	NAD	0%
1	5	Sheet Rock	Bath Room	F	S	G	LPD	"	N	NAD	0%
2	6	Joint Compound	Front Room on Left	F	S	G	LPD	2,434 SF	N	NAD	0%
2	7	Joint Compound	Middle Room on Left	F	S	G	LPD	"	N	NAD	0%
2	8	Joint Compound	Rear Room on Left	F	S	G	LPD	"	N	NAD	0%
2	9	Joint Compound	Rear Room on Right	F	S	G	LPD	"	N	NAD	0%
2	10	Joint Compound	Bath Room	F	S	G	LPD	"	N	NAD	0%
3	11	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	100 SF	N	NAD	0%
3	12	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	"	N	NAD	0%
3	13TEM	Linoleum no glue	Kitchen Floor	NF	M	G	LPD	"	N	NAD	0%
4	14	Linoleum no glue	Bath Room Floor	NF	M	G	LPD	48 SF	N	NAD	0%
4	15	Linoleum no glue	Bath Room Floor	NF	M	G	LPD	"	N	NAD	0%
4	16TEM	Linoleum no glue	Bath Room Floor	NF	M	G	LPD	"	N	NAD	0%
5	17	Window Glazing	Front Window	NF	M	G	LPD	10 units 40LF	P	Chrysotile	2%
5	18	Window Glazing	Front Window	NF	M	G	LPD	"	Positive	Stop	2%
5	19TEM	Window Glazing	Left Side Front Window	NF	M	G	LPD	"	Positive	Stop	2%

\* **Homogenous Area** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

\*\*\*\* **Present Condition**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

G Localized, limited damage)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

D 10% distributed and less than 25% localized)

M = Miscellaneous - in a manner sufficient to determine if ACM

SD al to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

**LABORATORY FINDINGS:**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

<> **est os Finding**

P = Positive N = Negative

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

<<>> **e of Asbestos** Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

# Apex Environmental Management

## ASBESTOS - SUSPECT MATERIAL DATA TABLE

Client: Northside Development Group

Job No. 0615-124

Date: 8/3/2015

Address: 410 Magnolia Street, Spartanburg, SC 29303

Inspector Name & No.

Danny West BI-00655

Site Location/ Bldg. Name/No./ Description Vacant Home - 579 Vernon Street, Spartanburg South Carolina

Homog. Area *	Sample #	Sampled Material Description	Location Of Sample	F / NF **	Cat. (S,T,M) ***	Present Cond. ****	Pot. Disturb. *****	Quantity of Material / Homog.Area	Asbestos Finding (P/N) <>	Type of Asbestos <<>>	Percent Asbestos
6	20	Roof Shingles	Front of Roof	NF	M	G	LPD	1,500 SF	N	NAD	0%
6	21	Roof Shingles	Front of Roof	NF	M	G	LPD	"	N	NAD	0%
6	22TEM	Roof Shingles	Front of Roof	NF	M	G	LPD	"	N	NAD	0%
7	23	Roof Felt	Front of Roof	NF	M	G	LPD	1,500 SF	N	NAD	0%
7	24	Roof Felt	Front of Roof	NF	M	G	LPD	"	N	NAD	0%
7	25TEM	Roof Felt	Front of Roof	NF	M	G	LPD	"	N	NAD	0%

\* **Homogenous Area** Indicate samples that fall within a homogenous area with a "{"

\*\* **Friable/Nonfriable**

F = Friable

NF = Nonfriable

\*\*\* **Category**

\*\*\*\* **Present Condition**

S = Surfacing (3 samples if less than 1,000sf, 5 if between 1,000 and 5,000sf, 7 if over 5,000sf)

G = Localized, limited damage)

T = Thermal (at least 3 samples/homog. area, 1 per patched area if <6 lf or sf; note fibergl.,rubber,foam glass,etc.)

D = 10% distributed and less than 25% localized)

M = Miscellaneous - in a manner sufficient to determine if ACM

SD = Equal to or less than 10% distributed / 25% localized)

\*\*\*\*\* **Potential For Future Disturbance**

**LABORATORY FINDINGS:**

LPD = Low Potential for Disturbance (Contact, Vibration, and Air Erosion all of Low Concern)

<> = **Asbestos Finding**

P = Positive

N = Negative

PD = Potential for Damage (Contact, Vibration, or Air Erosion of Moderate Concern)

<<>> = **Types of Asbestos**

Chry=Chrysotile, Amos=Amosite, Croc=Crocidolite,

PSD = Potential for Significant Damage (Contact, Vibration, or Air Erosion of High Concern)

Anth=Anthophyllite, Trem=Tremolite, Act=Actinolite

**SECTION III**

**Laboratory Analytical Results**



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505317

CustomerID: AXEM25

CustomerPO:

ProjectID:

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

Phone: (864) 640-5274  
Fax:  
Received: 08/04/15 9:50 AM  
Analysis Date: 8/6/2015  
Collected:

Project: 579 Vernon St.

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1 411505317-0001	Front Room on Left - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
2 411505317-0002	Middle Room Left - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
3 411505317-0003	Rear Room Left - Sheetrock	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
4 411505317-0004	Right Rear - Sheetrock	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
5 411505317-0005	Back Rear - Sheetrock	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (other)	None Detected
6 411505317-0006	Front Room on Left - Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected
7 411505317-0007	Middle Room on Left - Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected
8 411505317-0008	Rear Room on Left - Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected

Analyst(s)

Erin Guzowski (8)

Kristie Elliott (11)

Lee Plumley, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

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

Initial report from 08/06/2015 13:50:29



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505317
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 579 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
9 411505317-0009	Right Rear - Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected
10 411505317-0010	Back Rear - Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (other)	None Detected
11 411505317-0011	Kitchen - Linoleum No Glue	Beige Fibrous Homogeneous	15% Cellulose 1% Glass	84% Non-fibrous (other)	None Detected
12 411505317-0012	Kitchen - Linoleum No Glue	Beige Fibrous Homogeneous	15% Cellulose 1% Glass	84% Non-fibrous (other)	None Detected
14 411505317-0013	Bathroom - Linoleum No Glue	Gray/Tan/Green Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (other)	None Detected
15 411505317-0014	Bathroom - Linoleum No Glue	Gray/White Fibrous Homogeneous	8% Cellulose 1% Glass	91% Non-fibrous (other)	None Detected
17 411505317-0015	Front 10 Units - Window Glazing	Green/Beige Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
18 411505317-0016	Front 10 Units - Window Glazing				Stop Positive (Not Analyzed)

Analyst(s)  
 Erin Guzowski (8)  
 Kristie Elliott (11)

  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

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

Initial report from 08/06/2015 13:50:29



# EMSL Analytical, Inc.

376 Crompton Street, Charlotte, NC 28273

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

<http://www.EMSL.com>

[charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order:	411505317
CustomerID:	AXEM25
CustomerPO:	
ProjectID:	

Attn: <b>Rebecca Shultz</b> <b>Apex Environmental Management</b> <b>7 Winchester Court</b> <b>Mauldin, SC 29662</b>	Phone: (864) 640-5274 Fax: Received: 08/04/15 9:50 AM Analysis Date: 8/6/2015 Collected:
Project: 579 Vernon St.	

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
20 411505317-0017	- Shingles Top Layer	Gray/Black Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected
21 411505317-0018	- Shingles Top Layer	Gray/Black Fibrous Homogeneous	5% Glass	5% Quartz 10% Ca Carbonate 80% Non-fibrous (other)	None Detected
23 411505317-0019	- Shingles Bottom Layer	Black Fibrous Homogeneous	15% Cellulose	5% Quartz 5% Ca Carbonate 75% Non-fibrous (other)	None Detected
24 411505317-0020	- Shingles Bottom Layer	Black Fibrous Homogeneous	20% Cellulose	5% Quartz 5% Ca Carbonate 70% Non-fibrous (other)	None Detected

Analyst(s)  
 Erin Guzowski (8)  
 Kristie Elliott (11)

  
 Lee Plumley, Laboratory Manager  
 or other approved signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported 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. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%  
 Samples analyzed by EMSL Analytical, Inc. Charlotte, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from 08/06/2015 13:50:29



**EMSL Analytical, Inc.**

376 Crompton Street, Charlotte, NC 28273  
Phone/Fax: (704) 525-2205 / (704) 525-2382  
<http://www.EMSL.com> [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 411505317  
CustomerID: AXEM25  
CustomerPO:  
ProjectID:

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

Phone: (864) 640-5274  
Fax:  
Received: 08/06/15 2:00 PM  
Analysis Date: 8/10/2015  
Collected:

Project: **579 Vernon St.**

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

SAMPLE ID	DESCRIPTION	APPEARANCE	% MATRIX MATERIAL	% NON-ASBESTOS FIBERS	ASBESTOS TYPES
13 411505317-0021	Kitchen - Linoleum No Glue	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
16 411505317-0022	Bathroom - Linoleum No Glue	Beige Non-Fibrous Homogeneous	100	<0.32 Fibrous (other)	No Asbestos Detected
22 411505317-0023	- Shingles Top Layer	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
25 411505317-0024	- Shingles Bottom Layer	Black Fibrous Homogeneous	100	<0.51 Fibrous (other)	No Asbestos Detected

Analyst(s)  
Charles Harris (4)

Lee Plumley, Laboratory Manager  
or other approved signatory

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

Initial report from 08/10/2015 14:48:01

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

579 Vernon St

411505317

EMSL ANALYTICAL, INC.  
 LABORATORY-PRODUCTS-TRAINING

<b>Company : Apex Environmental Management</b>		<b>EMSL-Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
<b>Street: 7 Winchester Place</b>		Third Party Billing requires written authorization from third party	
<b>City: Mauldin</b>	<b>State/Province: SC</b>	<b>Zip/Postal Code:</b>	<b>Country:</b>
<b>Report To (Name): Rebecca Shultz</b>		<b>Fax #:</b>	
<b>Telephone #:</b>		<b>Email Address:</b>	
<b>Project Name/Number: 579 Vernon St</b>		<b>U.S. State Samples Taken: US</b>	
<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Purchase Order:			

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

3 Hours  
  6 Hours  
  24 Hrs  
  48 Hrs  
  3 Days  
  4 Days  
  5 Days  
  10 Days

\*For TEM Air 3 hours/6 hours, 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.

<b>PCM - Air</b> <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <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"/> NIOSH 9002 (<1%)	<b>TEM - Air</b> <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <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 <b>TEM - Water: EPA 100.2</b> Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) <b>Other:</b> <input type="checkbox"/>
---	---	---

**Check For Positive Stop - Clearly Identify Homogenous Group**

**Samplers Name: Danny West**      **Samplers Signature: Daniel E West**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
See attached			

<b>Client Sample # (s):</b> -	<b>Total # of Samples:</b>
<b>Relinquished (Client):</b> Daniel E West <b>Date:</b> 8/3/15 <b>Time:</b> 1900	
<b>Received (Lab):</b> Kyle Wilson <b>Date:</b> 8/4/15	<b>Time:</b> 9:50am EMSL Fk
<b>Comments/Special Instructions:</b> 80636316 7201	

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

579 Vernon St  
 924 sq ft

411505317

EMSL ANALYTICAL, INC.  
 LABORATORY-PRODUCTS-TRAINING

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
1	sheetrock front room on left	2434 sq ft	
2	" middle room left		
3	" rear room left		
4	" right rear		
5	" back rear		
6	joint compound front room on left		
7	" middle room on left		
8	" rear room on left		
9	" right rear		
10	" back rear		
11	linoleum kitchen no glue	120 sq ft	
12	" " "		
13	" " "		
14	" bathroom no glue	48 sq ft	
15	" " "		
16	" " "		

TEM  
 TEM

\*Comments/Special Instructions:



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



Photo 1 – 579 Vernon Street.



Photo 2 – Drywall walls



Photo 3 – Fiber Ceiling Tiles



Photo 4 – Drywall under paneling.

**SECTION V**

**SC DHEC Asbestos Inspector License**

North Carolina  
Asbestos Accreditation



Rebecca W Shultz  
7 Winchester Ct  
Mauldin, SC 29662

108487

EXPIRATION

06-30-2016

DOB	SEX	HT	WT
09-19-1974	F	5'4"	175
CLASS	#	EXP	
DESIGNER	40465	06-16	
INSPECTOR	12394	06-16	
SUPER AIR MONITOR	90151	08-15	

SCDHEC ISSUED  
Asbestos ID Card

Rebecca Shultz



CONSULTPD  
CONSULTBI

Expires

PD-00060 06/10/16  
BI-00492 06/09/16