



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

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## Apex Project Number 0617-111

January 5, 2018

Martin L. Livingston, Jr., AICP, CPM  
Neighborhood Services Director  
City of Spartanburg  
PO Box 1749  
Spartanburg, SC 29304

Reference: Asbestos Assessment Services  
Cammie Clagett Courts  
Phase 2 - 9 Buildings (42 Units)  
Highland Street Area  
Spartanburg, South Carolina

Dear Mr. Livingston:

Apex Environmental Management, Inc. (Apex) has completed asbestos containing materials assessment at the above-referenced property. The survey was limited in that demolition, such as jack/sledge hammering or cutting into walls, ceilings, floors, or structural members to expose possible concealed ACM was not performed. Included in this report is a summary of our field activities and the results obtained. Roof sampling was performed as part of this assessment. The objectives of the survey included the following:

- Identification of suspect asbestos-containing material (ACM) in readily observable locations. Limited demolition of building finishes was conducted in the building and associated exteriors included in the assessment.
- Asbestos survey with sample collection by South Carolina licensed inspectors.
- Suspect ACM analysis by polarized light microscopy (PLM) utilizing EMSL Analytical, Inc. (EMSL) 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.

## PROJECT INFORMATION

Cammie Clagett Courts is a residential apartment community located in the Highland Street area of Spartanburg, South Carolina. The original construction is approximately in the early 1970's and includes a neighborhood administrative office building and thirty-seven (37) residential apartment

buildings. Apex was requested to perform asbestos assessment services on nine (9) residential buildings (42 units) during Phase 2 of the above referenced project. The apartment buildings include a one-story, one bedroom with one bathroom duplex, four (4) two-story, two and three bedroom with one bathroom 6-plexes and four(4) two-story, two and three bedroom with one bathroom 4-plexes.

The residential exterior building materials include caulks on the gable vents, windows and doors. The pitched wooden roofs and awnings consist of shingles, felt with black and gray mastic/tar and painted metal on the roof penetrations. Caulk on the awnings and roof flashing exists. Black caulk found on the exterior windows is the same black caulk found on portions of the interior windows. Red and gray wall penetration filler/mastic exists on the exterior brick walls and OSB board is located beneath vinyl siding and brick.

Interior building materials within the buildings include multiple types and layers of floor tile and mastic over concrete and beneath wood. Additionally, vinyl flooring with mastic exists above and beneath wood and beneath ceramic tile in a portion of the bathrooms. 12"x12" brown streaked floor tile with mastic exists beneath a top layer of 12"x12" tan speckled floor tile and mastic throughout the residences. The CMU block walls do not contain filler, and bathroom walls and ceilings consist of plaster with finish over unfinished drywall. Portions of bathroom walls were thicker plaster with finish with no unfinished drywall beneath. Drywall with joint compound and tape exists throughout the interior of the residences. Portions of walls and ceilings contain drywall, joint compound and tape patches. Additionally, multiple types of caulk exist within the bathrooms, kitchens, windows, HVAC closets and portions of the doors. HVAC mastic and tape exists within the HVAC closets and on ducts above the ceilings. Kitchen double sinks contain white and black coatings and wall backsplashes with mastic exist within the residences.

Apex observed two (2) separate layers of approximately ½ inch thick wooden acoustical board within the wall cavity of the drywall system along the shared walls of adjoining units. Portions of the wall systems throughout the buildings may not have wooden acoustical board within the wall cavities. Additionally, insulation and wooden composite board with and without felt paper was identified beneath the drywall wall systems along the exterior/perimeter walls of the buildings. The bottom layer of asbestos containing floor tiles and mastics located on the 2<sup>nd</sup> floor of the buildings exist underneath wooden sheet flooring. Asbestos containing floor tiles and mastics exist above wood and beneath ceramic tile and additional wood in a portion of the bathrooms.

## **METHODS**

Apex was requested to perform a limited asbestos assessment to identify asbestos-containing materials (ACM) which could be disturbed prior to or during scheduled demolition activities. The National Emission Standard for Hazardous Air Pollutants (NESHAP) requires the identification of friable ACM and non-friable ACM likely to become friable during demolition and/or renovation activities. NESHAP requires that the identified ACM be removed prior to initiating activities likely to disturb the ACM.

As per AHERA regulations, bulk asbestos samples were collected from random locations of each homogeneous area, with the material's number of samples based upon the following criteria:

- Thermal Insulation Materials (piping, breeching, boiler insulation, etc.) – A minimum of three (3) samples are required. Only patch areas (less than 6 square or linear feet) may have one (1) sample collected.
- Surfacing Materials (plaster, fireproofing, sheetrock and joint compound, etc.) – A minimum of seven (7) samples are to be taken for areas greater than 5,000 square feet; five (5) for areas greater than 1,000 square feet, but less than 5,000 square feet; three (3) for areas less than 1,000 square feet.
- Miscellaneous Materials (flooring, adhesives, roofing, floor tiles, etc.) – A minimum of three (3) samples are required.
  - If samples of non-friable organically bound (NOB) materials were collected and reported by the laboratory to contain less than 1% asbestos by PLM, these materials were re-analyzed in accordance with SCDHEC requirements for NOB's by transmission electron microscopy (TEM).

The asbestos survey was performed by Mr. Tom Oliver (SC DHEC asbestos inspector license # BI-00680, exp. 01/18/2018), Mr. Ted Shultz (SC/DHEC inspector license # BI-00971, exp. 01/18/2018), from April 25<sup>th</sup> to 26<sup>th</sup>, 2017 and November 29<sup>th</sup> to December 1<sup>st</sup>, 2017. The survey consisted of observing the accessible areas throughout the interiors, exteriors and roofs of the Cammie Clagett Court residential buildings slated for demolition activities for the presence of suspect materials which may contain asbestos. The survey involved detecting both friable materials (materials which can be crumbled, pulverized or reduced to a powder by hand pressure when dry) and non-friable materials (materials which pose a hazard when sawn, sanded, drilled or pulverized). Homogeneous materials (based on material type, color, texture, etc.) were identified in various functional spaces during the survey.

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. Six hundred twenty-four (624) 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). EMSL participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Their NVLAP accreditation number is 200841-0. Due to EPA regulations, samples are split into homogeneous layers and each layer is analyzed separately. Six hundred ninety-three (693) samples were analyzed due to layering by PLM and positive stop methods. In accordance with South Carolina Regulation 61-86.1, non-friable organically bound materials that are reported to be non-asbestos containing by PLM analysis must also be analyzed by Transmission Electron Microscopy (TEM). Two hundred-six (206) samples were analyzed using TEM.

## **RESULTS**

The EPA defines an asbestos-containing material (ACM) as a material containing greater than 1% asbestos. OSHA defines ACM as a material containing detectable amount of asbestos. Multiple materials were analyzed to contain less than 1% asbestos and it should be noted that OSHA asbestos regulations will apply. The *Asbestos PLM & TEM Data Table* is provided in Appendix II. The following materials identified to contain asbestos at greater than 1% include:

<b>Building # 1</b>			
<b>Units 440, 442, 444, 446, 448, 450 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	440 442, 444, 448 & 450 throughout interiors	Drywall with Joint Compound and Tape	11,665 SF
9-13	446 throughout interiors	Drywall with skim coat & tape	2,335 SF
55-57	440, 442, 444, 448 & 450 throughout except in bathrooms & HVAC closets; 446 throughout except in HVAC closet	12" x 12" brown streaked floor tile & mastic (bottom layer)	4,650 SF
58-60	440 & 448 kitchens (double sinks)	Black sink coating	2 EA
76-78	Doors	Door caulk	12 EA
94-96	Roof gable vents	Caulk	2 EA
100-102	Roof penetrations	Black/gray mastic	4 SF

<b>Building # 2</b>			
<b>Units 410, 412, 414, 416, 418, 420 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
4-6	Doors	Door caulk	12 EA
10-13	410, 414, 418, 420 kitchens (double sinks)	Black sink coating	4 EA
14-16	410, 412, 414, 416, 418, 420 throughout downstairs except in HVAC closets	12" tan floor tile & mastic (bottom layer)	2,315 SF
17-19	410, 412, 414, 416, 418, 420 throughout upstairs except in bathrooms	12" x 12" grey floor tile & mastic (bottom layer)	2,315 SF
20-22	418 & 420 HVAC closets	Brown HVAC mastic	15 LF
23-29	410, 412, 414, 416, 418, 420 throughout interiors	Drywall with joint compound and tape	14,000 SF
39-41	418 kitchen stove backsplash	Wall covering under stove backsplash	5 SF
100-102	Roof penetrations	Black/gray mastic	4 SF

<b>Building # 3</b>			
<b>Units 350, 352, 354, 356, 358, 360 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
7-9	Door	Door caulk	12 EA
10-12	All kitchens (double sinks)	Black sink coating	6 EA
19-25	350, 352, 354, 356, 358, 360 throughout interiors	Drywall with joint compound and tape	14,000 SF
26-28	350, 352, 354, 356, 358, 360 throughout downstairs except in HVAC closets	12" x 12" cream floor tile & mastic (bottom layer)	2,315 SF
29-31	350, 352, 354, 356, 358, 360 throughout upstairs except in bathrooms	12" x 12" brown floor tile & mastic (bottom layer)	2,315 SF
83-85	Roof penetrations	Black/grey mastic/tar	4 SF

<b>Building # 4</b>			
<b>Units 351, 353, 355, 357 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	351, 353, 355, 357 throughout interiors	Drywall with joint compound and tape	12,000 SF
12-14	351 to 357 throughout except in bathrooms & HVAC closets	12" x 12" brown streaked floor tile & mastic (bottom layer)	3,525 SF
33-35	353 & 355 kitchens (double sinks)	Black sink coating	2 EA
69-71	Roof penetrations	Black/grey mastic/tar	4 SF

<b>Building # 5</b>			
<b>Units 361, 363, 365, 367 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	361, 363, 365, 367 throughout interiors	Drywall with joint compound and tape	12,000 SF
12-14	361 to 367 throughout except in bathrooms & HVAC closets	12" x 12" brown streaked floor tile & mastic (bottom layer)	3,525 SF
24-26	Kitchens (double sinks)	Black sink coating	4 EA
57-59	Roof penetrations	Black/grey mastic/tar	4 SF

<b>Building # 6</b>			
<b>Units 350, 352, 354, 356 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	350, 352, 354, 356 throughout interiors	Drywall with joint compound and tape	12,000 SF
15-17	356 throughout except in bathroom & HVAC closet	12" x 12" cream floor tile & mastic (bottom layer)	885 SF
27-29	350 & 352 kitchens (double sink)	Black sink coating	2 EA
63-65	Roof penetrations	Black/grey mastic/tar	4 SF
Assumed	350 to 354 throughout except bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	2,640 SF

<b>Building # 36</b>			
<b>Units 410 ,412, 414, 416 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	410,412, 414, 416 throughout interiors	Drywall with joint compound and tape	12,000 SF
28-30	414 & 416 kitchens (double sinks)	Black sink coating	2 EA
Assumed	410 to 416 throughout except bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	3,525 SF

<b>Building # 37</b>			
<b>Units 415 &amp; 417 - One Story; One Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-5	415 & 417 throughout interior	Drywall with joint compound and tape	3,400 SF
12-14	Kitchens (double sinks)	Black sink coating	2 EA
36-38	Doors	Door caulk	4 EA
Assumed	415 & 417 throughout except for HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	1,000 SF

<b>Building # 38</b>			
<b>Units 420, 422, 424, 426, 428, 430 - Two Story; Two &amp; Three Bedroom; One Bathroom</b>			
<b>Sample #</b>	<b>Location of ACM</b>	<b>Description of ACM</b>	<b>Estimated Quantities</b>
1-7	420, 422, 424, 426, 428, 430 throughout interiors	Drywall with joint compound and tape	14,000 SF
16-18	420 kitchen	12" x 12" cream floor tile & mastic (bottom layer)	215 SF
19-21	420 2nd floor hallway	12" x 12" beige floor tile & mastic (bottom layer)	40 SF
39-41	Kitchens (double sinks)	Black sink coating	6 EA
Assumed	420 to 430 throughout except in bathrooms & HVAC closets	12" x 12" brown streaked floor tile and mastic (bottom layer)	4,370 SF

## 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.

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.

*Cammie Clagett Courts-Phase 2  
Asbestos Containing Materials Assessment  
Apex Project No. 0617-111  
January 5, 2018*

This report summarizes our evaluation of the conditions observed at the site. The findings prepared by Apex are based upon testing performed within the Cammie Clagett Courts Apartment Community located at 422 Concord Avenue in Spartanburg, South Carolina. 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.**

Apex appreciates the opportunity to provide you with our asbestos consulting services and looks forward to our continued association. If you have any questions about this report or any other industrial hygiene concerns please contact us at (864) 404-3210.

Sincerely,

**Apex Environmental Management, Inc.**



Tom Oliver  
Director of Operations



Rebecca W. Shultz, CIH, CSP  
President

- Appendix I Photographic Log
- Appendix II Asbestos PLM & TEM Data Tables
- Appendix III Site Overview with Building Numbers & Unit Cross-Section Drawing
- Appendix IV Laboratory Results & Chain of Custody
- Appendix V SC DHEC Asbestos Inspector Licenses

**APPENDIX I**  
**PHOTOGRAPHIC LOG**



Photo 1 – Typical view of drywall with joint compound and tape throughout buildings 1-6 & 36-38.



Photo 2 – Typical view of drywall with joint compound and tape throughout buildings 1-6 & 36-38.



Photo 3 – Typical view of 12" x 12" tan speckled floor tile & mastic over 2<sup>nd</sup> layer of floor tile & mastic over concrete throughout buildings 1-6 & 36-38.



Photo 4 – Beige HVAC mastic above the ceiling and in HVAC closet in building 37.



Photo 5 – Typical view of kitchen counter caulk throughout buildings 1-6 & 36-38.



Photo 6 – Typical view of the black kitchen sink coating in buildings 1-6 & 36-38.



Photo 7 – Typical view of the bathroom sink caulk in buildings 1-6 & 36-38.



Photo 8 – Typical view of the shower stall caulk in buildings 1-6 & 36-38.



Photo 9 – Typical view of the roof shingles & felt on the main roof and awning roofs on buildings 1-6 & 36-38.



Photo 10 – Typical view of the paint coated roof vents on buildings 1-6 & 36-38.



Photo 11 – Typical view of black & black/gray mastic/tar on roof penetrations on buildings 1-6 & 36-38.



Photo 12 – Typical view of the black and brown interior and exterior window caulk in buildings 1-6 & 36-38.



Photo 13 – Typical view of the door caulk in buildings 1-6 & 36-38.



Photo 14 – Typical view of roof gable vents with caulk on buildings 1-6 & 36-38.



Photo 15 – Typical view of the caulk on the awning & flashing on buildings 1-6 & 36-38.



Photo 16 – Typical view of the caulk on the main roof flashing on buildings 1-6 & 36 & 38.



Photo 17 – Typical view of 12" x 12" tan speckled floor tile & mastic over 2<sup>nd</sup> layer of floor tile & mastic under wood throughout buildings 1-6 & 36-38.



Photo 18 – Typical view of ceramic tile with wood & vinyl flooring beneath throughout buildings 1-6 & 36-38.



Photo 19 – Typical view of HVAC tape & mastic above the ceilings throughout buildings 1-6 & 36 & 38.



Photo 20 – Typical view of vinyl flooring & mastic in portions of the buildings (no ceramic tile exists).



Photo 21 – Typical view of caulk on the HVAC units throughout the HVAC closets in buildings 1-6 & 36-38.



Photo 22 – Typical view of caulk on the HVAC units throughout the HVAC closets in buildings 1-6 & 36-38.



Photo 23 – Typical view of 12"x12" brown streaked floor tile and mastic (bottom layer) assumed positive in Buildings 7 to 35.



Photo 24 – Typical view of a 2-story; 2 & 3 bedrooms; 1 bathroom; 6-plex apartment building.

*Cammie Clagett Housing Complex ACM-Phase 2*  
*422 Concord Avenue*  
*Spartanburg, South Carolina*  
*Apex Project # 0617-111*



Photo 25 – Typical view of a 2-story; 2 & 3 bedrooms; 1 bathroom; 4-plex apartment building.



Photo 26 – Building 37; 1-story; 1 bedroom; 1 bathroom duplex apartment building.

**APPENDIX II**  
**ASBESTOS PLM & TEM DATA TABLES**

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

Project Name: Cammi Clagett Housing Complex ACM

Building Number: 1

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 440, 442, 444, 446, 448, 450

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	440 442, 444, 448 & 450 throughout interiors	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	11,665 SF
2						
3						
4						
5						
6						
7						
8	SAMPLE NUMBER NOT USED					
9	446 Throughout interiors	Drywall with skim coat & tape	PLM - 2% & 3% Chrysotile	Friable	Good	2,335 SF
10						
11						
12						
13						
14	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	1,300 SF
15						
16						
17						
18						
19	Bathrooms	Mastic under shower stall	PLM - NAD	Non-Friable	Good	35 SF
20			TEM - NAD			
21						
22	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	90 LF
23			TEM - NAD			
24						

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Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25	HVAC closets	White HVAC caulk	PLM - NAD	Non-Friable	Good	40 LF
26			TEM - NAD			
27			TEM - NAD			
28	HVAC closets	Yellow HVAC caulk	PLM - NAD	Non-Friable	Good	40 LF
29			TEM - NAD			
30			TEM - NAD			
31	440, 444, 446, 448 & 450 bathrooms	Bathroom shower stall caulk	PLM - NAD	Non-Friable	Good	180 LF
32			TEM - NAD			
33			TEM - NAD			
34	442 bathroom	Bathroom shower stall caulk	PLM - NAD	Non-Friable	Good	35 LF
35			TEM - NAD			
36			TEM - NAD			
37	442 kitchen stove backsplash	Mastic under stove backsplash	PLM - NAD	Non-Friable	Good	5 SF
38			TEM - NAD			
39			TEM - NAD			
40	442 throughout upstairs	Black cove base with tan mastic	PLM - NAD	Non-Friable	Good	125 LF
41			TEM - NAD			
42			TEM - NAD			
43	446 kitchen stove backsplash	Mastic under stainless steel stove backsplash on CMU block	PLM - NAD	Non-Friable	Good	5 SF
44			TEM - NAD			
45			TEM - NAD			
46	446 bathroom	Black cove base with tan mastic	PLM - NAD	Non-Friable	Good	30 LF
47			TEM - NAD			
48			TEM - NAD			

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Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49	440 to 448 throughout interiors	Interior white window caulk	PLM - NAD	Non-Friable	Good	11 EA
50			TEM - NAD			
51-A						
51-B	446 interior doors	Interior door caulk	PLM - NAD	Non-Friable	Good	2 EA
52			TEM - NAD			
53						
54	440 to 448 throughout interiors	Interior white window caulk	PLM - NAD	Non-Friable	Good	Duplicate
55	440, 442, 444, 448 & 450 throughout except in bathrooms & HVAC closets; 446 throughout except in HVAC closet (bottom layer exists)	12" x 12" tan speckled floor tile & mastic (top layer) over 12" x 12" brown streaked floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 3% chry (bottom layer tile & mastic)	Non-Friable	Good	4,650 SF
56			TEM - NAD (top layer tile & mastic)			
57						
58	440 & 448 kitchens (double sinks)	Black sink coating	PLM - 3% Chrysotile	Friable	Good	2 EA
59						
60						
61	442 front, middle & back bedrooms & upstairs hallway	12" x 12" grey speckled floor tile & adhesive (top layer)	PLM - NAD	Non-Friable	Good	450 SF
62			TEM - NAD			
63						
64	442 bathroom	Grey square pattern vinyl floor with mastic	PLM - NAD	Non-Friable	Good	25 SF
65			TEM - NAD			
66						
67	442, 444, 446, 450 kitchens (double sinks)	White sink coating	PLM - NAD	Friable	Good	4 EA
68			TEM - NAD			
69						

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

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Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
70	446 bathroom	Grey stone square pattern vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	25 SF
71			TEM - NAD			
72						
73	446 bathroom under wood	Cream square pattern vinyl floor with felt paper & mastic	PLM - NAD	Non-Friable	Good	25 SF
74			TEM - NAD			
75						
76	Doors	Door caulk	PLM - <1% chry	Non-Friable	Good	12 EA
77			TEM - 7.7% chry			
78						
79	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	45 EA
80			TEM - NAD			
81						
82	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
83			TEM - NAD			
84						
85	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	4,250 SF
86			TEM - NAD			
87						
88	<b>SAMPLE NUMBERS NOT USED</b>					
89						
90						
91	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	200 LF
92			TEM - NAD			
93						

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Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
<b>94</b>	<b>Roof gable vents</b>	<b>Roof gable caulk (beige &amp; grey)</b>	PLM - NAD (beige); <b>3% chry (grey)</b>	<b>Non-Friable</b>	<b>Good</b>	<b>2 EA</b>
<b>95</b>						
<b>96</b>			TEM - NAD			
97	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	5 SF
98						
99						
<b>100</b>	<b>Roof penetrations</b>	<b>Black/grey mastic/tar</b>	<b>PLM - 3% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>101</b>						
<b>102</b>						
103	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
104						
105			TEM - NAD			

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 2

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410, 412, 414, 416, 418, 420

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Interior windows	Black window caulk	PLM - NAD	Non-Friable	Good	45 EA
2			TEM - NAD			
3						
4	Doors	Door caulk	PLM - 3% chrysotile	Non-Friable	Good	12 EA
5						
6						
7	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	90 LF
8			TEM - NAD			
9						
10	410, 414, 418, 420 kitchens (double sinks)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	4 EA
11						
13						
12	<b>SAMPLE NUMBER NOT USED</b>					
14	410, 412, 414, 416, 418, 420 throughout downstairs except in HVAC closets	12" x 12" cream floor tile & mastic (top layer) over 12" x 12" tan floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 3% & 6% chry (bottom layer tile & mastic)	Non-Friable	Good	2,315 SF
15			TEM - NAD (top layer tile & mastic)			
16						
17	410, 412, 414, 416, 418, 420 throughout upstairs except in bathrooms	12" x 12" cream speckled floor tile & mastic (top layer) over 12" x 12" grey floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 4% & 6% chry (bottom layer tile & mastic)	Non-Friable	Good	2,315 SF
18			TEM - NAD (top layer tile & mastic)			
19						
20	418 & 420 HVAC closets	Brown HVAC mastic	PLM - 5% chrysotile	Non-Friable	Good	15 LF
21						
22						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 2

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410, 412, 414, 416, 418, 420

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
23	Throughout interiors	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	14,000 SF
24						
25						
26						
27						
28						
29						
30	412 & 416 kitchens (double sinks)	White sink coating	PLM - NAD	Friable	Good	2 EA
31			TEM - NAD			
32						
33	Exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	45 EA
34			TEM - NAD			
35						
36	414 kitchen stove backsplash	White mastic under stove backsplash	PLM - NAD	Non-Friable	Good	5 SF
37			TEM - NAD			
38						
39	418 kitchen stove backsplash	Wall covering under stove backsplash	PLM - 2% Chrysotile	Friable	Good	5 SF
40						
41						
42	420 bathroom	Large square rock pattern vinyl floor with mastic	PLM - NAD	Non-Friable	Good	25 SF*
43	SAMPLE NUMBERS NOT USED					
44						
45	420 bathroom	Mastic under shower stall	PLM - NAD	Non-Friable	Good	35 SF
46			TEM - NAD			
47						

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

Project Name: Cammi Clagett Housing Complex ACM

Building Number: 2

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410, 412, 414, 416, 418, 420

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	412 bathroom	Large square tan stone pattern vinyl floor with mastic	PLM - NAD	Non-Friable	Good	25 SF
49			TEM - NAD			
50						
51	413 bathroom	Cove base with tan mastic	PLM - NAD	Non-Friable	Good	30 LF
52			TEM - NAD			
53						
54	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	1,300 SF*
55						
56						
57	Bathrooms	Bathroom shower stall and sink caulk	PLM - NAD	Non-Friable	Good	240 LF
58			TEM - NAD			
59						
60	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
61			TEM - NAD			
62						
63	Above ceilings	Tan HVAC tape with no mastic	PLM - NAD	Friable	Damaged	80 SF
64			TEM - NAD			
65						
66	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	Duplicate*
67						
68						
69	420 bathroom	Large square rock pattern vinyl floor with mastic	PLM - NAD	Non-Friable	Good	Duplicate*
70			TEM - NAD			

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

Project Name: Cammiel Clagett Housing Complex ACM

Building Number: 2

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410, 412, 414, 416, 418, 420

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
71	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	4,250 SF
72			TEM - NAD			
73						
74	SAMPLE NUMBERS NOT USED					
75						
76						
77	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	200 LF
78			TEM - NAD			
79						
80	Roof gable vents	Roof gable caulk	PLM - NAD	Non-Friable	Good	2 EA
81			TEM - NAD			
82						
83	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	5 SF
84						
85						
<b>86</b>	Roof penetrations	Black/grey mastic/tar	<b>PLM - 3% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>87</b>						
<b>88</b>						

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 3

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356, 358, 360

Project Number: 0617-111

Date: 4/25/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	45 EA
2			TEM - NAD			
3						
4	Interior windows	Black window caulk	PLM - NAD	Non-Friable	Good	45 EA
5			TEM - NAD			
6						
7	Doors	Door caulk	PLM - 2% chrysotile	Non-Friable	Good	12 EA
8						
9						
10	Kitchens (double sinks)	Black sink coating	PLM - 4% Chrysotile	Friable	Good	6 EA
11						
12						
13	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	90 LF
14			TEM - NAD			
15						
16	Brick wall penetrations	Brown caulk	PLM - NAD	Non-Friable	Good	2 SF
17			TEM - NAD			
18						
19	350, 352, 354, 356, 358, 360 throughout interiors	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	14,000 SF
20						
21						
22						
23						
24						
25						

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

Project Name: Cammi Clagett Housing Complex ACM

Building Number: 3

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356, 358, 360

Project Number: 0617-111

Date: 4/25/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
26	350, 352, 354, 356, 358, 360 throughout downstairs except in HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer) over 12" x 12" cream floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 2% & 5% chry (bottom layer tile & mastic)	Non-Friable	Good	2,315 SF
27			TEM - NAD (top layer tile & mastic)			
28						
29	350, 352, 354, 356, 358, 360 throughout upstairs except in bathrooms	12" x 12" tan speckled floor tile & mastic (top layer) over 12" x 12" brown floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 2% & 4% chry (bottom layer tile & mastic)	Non-Friable	Good	2,315 SF
30			TEM - NAD (top layer tile & mastic)			
31						
32	350 upstairs bedroom	Drywall patch	PLM - NAD	Friable	Good	1 SF
33						
34						
35	Bathrooms	Bathroom shower stall and sink caulk	PLM - NAD	Non-Friable	Good	240 LF
36			TEM - NAD			
37						
38	350 bathroom	Leveling compound & mastic under ceramic tile	PLM - NAD	Non-Friable	Good	25 SF
39			TEM - NAD			
40						
41	<b>SAMPLE NUMBERS NOT USED</b>					
42						
43						
44	HVAC closets	White HVAC mastic	PLM - NAD	Non-Friable	Good	40 LF
45			TEM - NAD			
46						

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

Project Name: Cammiel Claggett Housing Complex ACM

Building Number: 3

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356, 358, 360

Project Number: 0617-111

Date: 4/25/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
47	352 bathroom	Square stone pattern vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	25 SF
48			TEM - NAD			
49						
50	<b>SAMPLE NUMBERS NOT USED</b>					
51						
52						
53	Kitchens (double sinks)	White sink coating	PLM - NAD	Friable	Good	6 EA
54			TEM - NAD			
55						
56	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
57			TEM - NAD			
58						
59	360 bathroom	Stone pattern vinyl floor with no mastic	PLM - NAD	Non-Friable	Good	25 SF
60			TEM - NAD			
61						
62	Bathrooms	Plaster with finish	PLM - NAD	Friable	Good	1,300 SF*
63						
64						
65	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
66			TEM - NAD			
67						
68	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	4,250 SF
69			TEM - NAD			
70						

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

Project Name: Cammi Clagett Housing Complex ACM

Building Number: 3

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356, 358, 360

Project Number: 0617-111

Date: 4/25/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
71	<b>SAMPLE NUMBERS NOT USED</b>					
72						
73						
74	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	200 LF
75			TEM - NAD			
76						
77	Roof gable vents	Roof gable caulk	PLM - NAD	Non-Friable	Good	2 EA
78			TEM - NAD			
79						
80	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	5 SF
81						
82						
<b>83</b>	Roof penetrations	Black/grey mastic/tar	<b>PLM - 3% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>84</b>						
<b>85</b>						
86	Bathrooms	Plaster with finish with unfinished drywall beneath	PLM - NAD	Friable	Good	Duplicate*
87						
88						

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 4

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 351, 353, 355, 357

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	351, 353, 355, 357 throughout interiors	Drywall with joint compound and tape	PLM - 2% & 3% Chrysotile	Friable	Good	12,000 SF
2						
3						
4						
5						
6						
7						
8	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	900 SF
9						
10						
11						
12	351 to 357 throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer) over 12" x 12" brown streaked floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 4% chry (bottom layer tile & mastic)	Non-Friable	Good	3,525 SF
13			TEM - NAD (top layer tile & mastic)			
14						
15	351 bathroom	Grey large square pattern vinyl floor with mastic	PLM - NAD	Non-Friable	Good	25 SF
16			TEM - NAD			
17						
18	351 kitchen (double sink)	White sink coating	PLM - NAD	Friable	Good	1 EA
19			TEM - NAD			
20						
21	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	55 LF
22			TEM - NAD			
23						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 4

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 351, 353, 355, 357

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	Bathrooms	Bathroom shower stall and sink caulk	PLM - NAD	Non-Friable	Good	160 LF
25			TEM - NAD			
26						
27	HVAC closets	White HVAC caulk	PLM - NAD	Non-Friable	Good	25 LF
28			TEM - NAD			
29						
30	351 front & back bedrooms & 357 front bedroom	Interior window caulk	PLM - NAD	Non-Friable	Good	5 EA
31			TEM - NAD			
32						
33	353 & 355 kitchens (double sinks)	Black sink coating	PLM - 2% chrysotile	Friable	Good	2 EA
34						
35						
36	351 & 355 kitchen stove backsplash	Mastic under stove backsplash	PLM - NAD	Non-Friable	Good	10 SF
37			TEM - NAD			
38						
39	Doors	Door caulk	PLM - NAD	Non-Friable	Good	8 EA
40			TEM - 0.23% chrysotile			
41						
42	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	29 EA
43			TEM - NAD			
44						
45	353 exterior window	Brown hard window caulk	PLM - NAD	Non-Friable	Good	1 EA
46			TEM - NAD			
47						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 4

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 351, 353, 355, 357

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
49			TEM - NAD			
50			TEM - NAD			
51	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
52			TEM - NAD			
53			TEM - NAD			
54	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	2,500 SF
55			TEM - NAD			
56			TEM - NAD			
57	<b>SAMPLE NUMBERS NOT USED</b>					
58						
59						
60	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	150 LF
61			TEM - NAD			
62			TEM - NAD			
63	Roof gable vents	Roof gable caulk (beige & grey)	PLM - NAD	Non-Friable	Good	2 EA
64			TEM - NAD			
65			TEM - NAD			
66	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	2 SF
67			TEM <1% chrysotile			
68			TEM <1% chrysotile			
<b>69</b>	<b>Roof penetrations</b>	<b>Black/grey mastic/tar</b>	<b>PLM - 4% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>70</b>						
<b>71</b>						

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 5

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 361, 363, 365, 367

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	361, 363, 365, 367 throughout interiors	Drywall with joint compound and tape	PLM - 2% & 3% Chrysotile	Friable	Good	12,000 SF
2						
3						
4						
5						
6						
7						
8	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	900 SF
9						
10						
11						
12	361 to 367 throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer) over 12" x 12" brown streaked floor tile & mastic (bottom layer)	PLM - NAD (top layer tile & mastic); 4% chry (bottom layer tile & mastic)	Non-Friable	Good	3,525 SF
13			TEM - NAD (top layer tile & mastic)			
14						
15	HVAC closets	White HVAC mastic	PLM - NAD	Non-Friable	Good	25 LF
16			TEM - NAD			
17						
18	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	55 LF
19			TEM - NAD			
20						
21	Bathrooms	Bathroom shower stall and sink caulk	PLM - NAD	Non-Friable	Good	160 LF
22			TEM - NAD			
23						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 5

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 361, 363, 365, 367

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	Kitchens (double sinks)	Black sink coating	PLM - 3% chrysotile	Friable	Good	4 EA
25						
26						
27	363 front bedroom	Interior window caulk	PLM - NAD	Non-Friable	Good	1 EA
28			TEM - NAD			
29						
30	Doors	Door caulk	PLM - NAD	Non-Friable	Good	8 EA
31			TEM - NAD			
32						
33	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	30 EA
34			TEM - NAD			
35						
36	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
37			TEM - NAD			
38						
39	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
40			TEM - NAD			
41						
42	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	2,500 SF
43			TEM - NAD			
44						
45	<b>SAMPLE NUMBERS NOT USED</b>					
46						
47						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 5

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 361, 363, 365, 367

Project Number: 0617-111

Date: 4/26/2017 & 11/30/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	150 LF
49			TEM - NAD			
50						
51	Roof gable vents	Roof gable caulk (beige & grey)	PLM - NAD	Non-Friable	Good	2 EA
52			TEM - NAD			
53						
54	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	2 SF
55						
56						
<b>57</b>	<b>Roof penetrations</b>	<b>Black/grey mastic/tar</b>	<b>PLM - 2% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>58</b>						
<b>59</b>						

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 6

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356

Project Number: 0617-111

Date: 4/26/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	350, 352, 354, 356 throughout interiors	Drywall with joint compound and tape	PLM - 2% Chrysotile	Friable	Good	12,000 SF
2						
3						
4						
5						
6						
7						
8	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	900 SF
9						
10						
11						
12	350 to 356 throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer)	PLM - NAD	Non-Friable	Good	3,525 SF
13			TEM - NAD			
14						
15	356 throughout except in bathroom & HVAC closet	12" x 12" cream floor tile & mastic (bottom layer)	PLM-6% chry (mastic); NAD (tile)	Non-Friable	Good	885 SF
16			TEM - NAD (tile)			
17						
18	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	55 LF
19			TEM - NAD			
20						
21	HVAC closets	HVAC caulk	PLM - NAD	Non-Friable	Good	25 LF
22			TEM - NAD			
23						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 6

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356

Project Number: 0617-111

Date: 4/26/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	Bathrooms	Bathroom shower stall and sink caulk	PLM - NAD	Non-Friable	Good	160 LF
25						
26			TEM - NAD			
27	350 & 352 kitchens (double sink)	Black sink coating	PLM - 5% chrysotile	Friable	Good	2 EA
28						
29						
30	352 & 356 front bedrooms	Interior window caulk	PLM - NAD	Non-Friable	Good	2 EA
31						
32			TEM - NAD			
33	354 & 356 kitchens (double sink)	White sink coating	PLM - NAD	Friable	Good	2 EA
34						
35			TEM - NAD			
36	Doors	Door caulk	PLM - NAD	Non-Friable	Good	8 EA
37						
38			TEM - NAD			
39	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	30 EA
40						
41			TEM - NAD			
42	Brick wall penetrations	Grey wall penetration mastic	PLM - NAD	Non-Friable	Good	2 SF
43						
44			TEM - NAD			
45	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
46						
47			TEM - NAD			

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 6

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 350, 352, 354, 356

Project Number: 0617-111

Date: 4/26/2017 & 12/1/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	2,500 SF
49			TEM - NAD			
50						
51	<b>SAMPLE NUMBERS NOT USED</b>					
52						
53						
54	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	150 LF
55			TEM - NAD			
56						
57	Roof gable vents	Roof gable caulk (beige & grey)	PLM - NAD	Non-Friable	Good	2 EA
58			TEM - NAD			
59						
60	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	2 SF
61						
62						
<b>63</b>	Roof penetrations	Black/grey mastic/tar	<b>PLM - 5% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 SF</b>
<b>64</b>						
<b>65</b>						
<b>Assumed</b>	<b>350 to 354 throughout except bathrooms &amp; HVAC closets</b>	<b>12" x 12" brown streaked floor tile and mastic (bottom layer)</b>	<b>Assumed Positive</b>	<b>Non-Friable</b>	<b>Good</b>	<b>2,640 SF</b>

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 36

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410,412, 414, 416

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	410,412, 414, 416 throughout interiors	Drywall with joint compound and tape	PLM - 3% Chrysotile	Friable	Good	12,000 SF
2						
3						
4						
5						
6						
7						
8	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	900 SF
9						
10						
11						
12						
13	410 to 416 throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer)	PLM - NAD	Non-Friable	Good	3,525 SF
14			TEM - NAD			
15						
16	Above ceilings	Tan HVAC tape & mastic	PLM - NAD	Friable	Damaged	80 SF
17			TEM - NAD			
18						
19	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	55 LF
20			TEM - NAD			
21						
22	Bathrooms	Bathroom sink caulk	PLM - NAD	Non-Friable	Good	20 LF
23			TEM - NAD			
24						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 36

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410,412, 414, 416

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
25	412 HVAC closet	HVAC caulk	PLM - NAD	Non-Friable	Good	6 LF
26			TEM - NAD			
27						
28	414 & 416 kitchens (double sinks)	Black sink coating	PLM - 2% Chrysotile	Friable	Good	2 EA
29						
30						
31	Bathrooms	Bathroom shower stall caulk	PLM - NAD	Non-Friable	Good	150 LF
32			TEM - NAD			
33						
34	410 to 414 front bedrooms & 416 back bedroom	Interior hard white window caulk	PLM - NAD	Non-Friable	Good	8 EA
35			TEM - NAD			
36						
37	412 kitchen (double sink)	Black sink pad	PLM - NAD	Friable	Damaged	1 EA
38			TEM - NAD			
39						
40	416 kitchen & living room	Interior soft white window caulk	PLM - NAD	Non-Friable	Good	4 EA
41			TEM - NAD			
42						
43	Main roof & awning roofs	Roof shingles (2) and felt (1)	PLM - NAD	Non-Friable	Good	2,500 SF
44			TEM - NAD			
45						
46	<b>SAMPLE NUMBERS NOT USED</b>					
47						
48						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 36

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 410,412, 414, 416

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
49	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	150 LF
50			TEM - NAD			
51						
52	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	30 EA
53			TEM - NAD			
54						
55	Doors	Door caulk	PLM - NAD	Non-Friable	Good	8 EA
56			TEM - NAD			
57						
58	Roof gable vents	Roof gable caulk	PLM - NAD	Non-Friable	Good	2 EA
59			TEM - NAD			
60						
61	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	2 SF
62			TEM - NAD			
63						
64	Roof penetrations	Black mastic/tar	PLM - NAD	Non-Friable	Good	4 SF
65			TEM - NAD			
66						
<b>Assumed</b>	<b>410 to 416 throughout except bathrooms &amp; HVAC closets</b>	<b>12" x 12" brown streaked floor tile and mastic (bottom layer)</b>	<b>Assumed Positive</b>	<b>Non-Friable</b>	<b>Good</b>	<b>3,525 SF</b>

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 37

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 415 & 417

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	415 & 417 throughout interior	Drywall with joint compound and tape	PLM - 3% Chrysotile	Friable	Good	3,400 SF
2						
3						
4						
5						
6	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	400 SF
7						
8						
9	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	25 LF
10			TEM - NAD			
11						
12	Kitchens (double sinks)	Black sink coating	PLM - 3% Chrysotile	Friable	Good	2 EA
13						
14						
15	Bathrooms	Bathroom sink caulk	PLM - NAD	Non-Friable	Good	10 LF
16			TEM - NAD			
17						
18	Bathrooms	Bathroom shower stall caulk	PLM - NAD	Non-Friable	Good	70 LF
19			TEM - NAD			
20						
21	HVAC closets	Red & white HVAC caulk	PLM - NAD	Non-Friable	Good	15 LF
22			TEM - NAD			
23						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 37

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 415 & 417

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24	HVAC closets and above the drywall ceiling	Beige HVAC mastic	PLM - NAD	Non-Friable	Good	60 SF
25			TEM - NAD			
26			TEM - NAD			
27	415 & 417 throughout except for bathrooms & HVAC closets	12" x 12" tan speckled floor tile and mastic (top layer)	PLM - NAD	Friable	Good	950 SF
28			TEM - NAD			
29			TEM - NAD			
30	Main roof	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	1,350 SF
31			TEM - NAD			
32			TEM - NAD			
33	Interior & exterior windows	Black window caulk	PLM - NAD	Non-Friable	Good	8 EA
34			TEM - NAD			
35			TEM - NAD			
<b>36</b>	<b>Doors</b>	<b>Door caulk</b>	<b>PLM - 2% chrysotile</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4 EA</b>
<b>37</b>						
<b>38</b>						
39	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	2 SF
40			TEM - NAD			
41			TEM - NAD			
42	Roof penetrations	Black mastic/tar	PLM - NAD	Non-Friable	Good	2 SF
43			TEM - NAD			
44			TEM - NAD			
45	Roof gable vents	Roof gable caulk	PLM - NAD	Non-Friable	Good	2 EA
46			TEM - NAD			
47			TEM - NAD			

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 37

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 415 & 417

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
<b>Assumed</b>	<b>415 &amp; 417 throughout except for HVAC closets</b>	<b>12" x 12" brown streaked floor tile and mastic (bottom layer)</b>	<b>Assumed Positive</b>	<b>Non-Friable</b>	<b>Good</b>	<b>1,000 SF</b>

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 38

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 420, 422, 424, 426, 428, 430

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	420, 422, 424, 426, 428, 430 throughout interiors	Drywall with joint compound and tape	PLM - 3% Chrysotile	Friable	Good	14,000 SF
2						
3						
4						
5						
6						
7						
8	Bathrooms	Plaster with finish over unfinished drywall	PLM - NAD	Friable	Good	1,300 SF
9						
10						
11						
12						
13	420 to 430 throughout except in bathrooms & HVAC closets	12" x 12" tan speckled floor tile & mastic (top layer)	PLM - NAD	Non-Friable	Good	4,625 SF
14			TEM - NAD			
15						
16	420 kitchen	12" x 12" cream floor tile & mastic (bottom layer)	PLM-2% chry (mastic); NAD (tile)	Non-Friable	Good	215 SF
17			TEM - NAD (tile)			
18						
19	420 2nd floor hallway	12" x 12" beige floor tile & mastic (bottom layer)	PLM-2% chry (mastic); NAD (tile)	Non-Friable	Good	40 SF
20			TEM - NAD (tile)			
21						
22	420 & 422 bathroom	12" x 12" light tan floor tile & mastic (bottom layer)	PLM - NAD	Non-Friable	Good	50 SF
23			TEM - NAD			
24-A						

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

Project Name: Cammie Clagett Housing Complex ACM

Building Number: 38

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 420, 422, 424, 426, 428, 430

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
24-B	Bathrooms	Bathroom sink caulk	PLM - NAD	Non-Friable	Good	30 LF
25			TEM - NAD			
26						
27	Bathrooms	Bathroom shower stall caulk	PLM - NAD	Non-Friable	Good	215 LF
28			TEM - NAD			
29						
30	Kitchens	Kitchen counter caulk	PLM - NAD	Non-Friable	Good	90 LF
31			TEM - NAD			
32						
33	HVAC closets	HVAC caulk (caulk only)	PLM - NAD	Non-Friable	Good	40 LF
34			TEM - NAD			
35						
36	Above ceilings	HVAC tape and mastic	PLM - NAD	Friable	Damaged	60 SF
37			TEM - NAD			
38						
<b>39</b>	<b>Kitchens (double sinks)</b>	<b>Black sink coating</b>	<b>PLM - 2% Chrysotile</b>	<b>Friable</b>	<b>Good</b>	<b>6 EA</b>
<b>40</b>						
<b>41</b>						
42	422 & 426 front bedrooms	Interior white window caulk	PLM - NAD	Non-Friable	Good	3 EA
43			TEM - NAD			
44						
45	Main roof & awning roofs	Roof shingles (3) and felt (1)	PLM - NAD	Non-Friable	Good	4,250 SF
46			TEM - NAD			
47						

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

Project Name: Cammi Clagett Housing Complex ACM

Building Number: 38

Project Location: 422 Concord Avenue, Spartanburg, South Carolina

Unit Numbers: 420, 422, 424, 426, 428, 430

Project Number: 0617-111

Date: 11/29/2017

Sample No.	Unit No. / Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
48	Roof vents	Paint coated metal	PLM - NAD	Non-Friable	Good	5 SF
49			TEM - NAD			
50			TEM - NAD			
51	Roof penetrations	Black mastic/tar	PLM - NAD	Non-Friable	Good	6 SF
52			TEM - NAD			
53			TEM - NAD			
54	<b>SAMPLE NUMBERS NOT USED</b>					
55						
56						
57	Roof & awnings flashing	Awning/flashing caulk	PLM - NAD	Non-Friable	Good	200 LF
58			TEM - NAD			
59			TEM - NAD			
60	Interior & exterior windows	Brown window caulk	PLM - NAD	Non-Friable	Good	45 EA
61			TEM - NAD			
62			TEM - NAD			
63	Doors	Door caulk	PLM - NAD	Non-Friable	Good	12 EA
64			TEM - NAD			
65			TEM - NAD			
66	Roof gable vents	Roof gable caulk	PLM - NAD	Non-Friable	Good	2 EA
67			TEM - NAD			
68			TEM - NAD			
<b>Assumed</b>	<b>420 to 430 throughout except in bathrooms &amp; HVAC closets</b>	<b>12" x 12" brown streaked floor tile and mastic (bottom layer)</b>	<b>Assumed Positive</b>	<b>Non-Friable</b>	<b>Good</b>	<b>4,370 SF</b>

NAD = No Asbestos Detected

LF = Linear Feet

EA = Each

Amos = Amosite

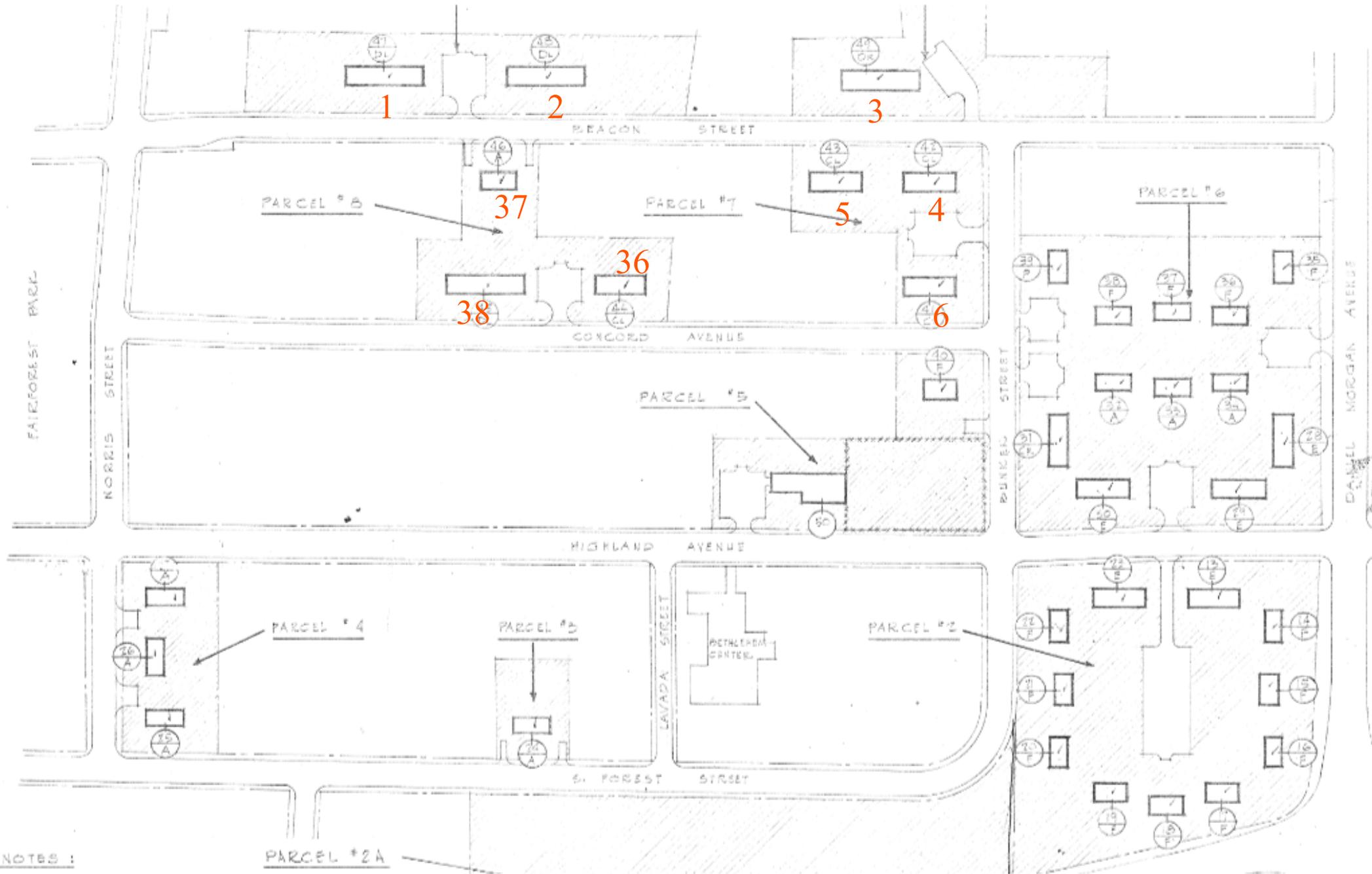
**Bold = Positive For Asbestos**

SF = Square Feet

Chry = Chrysotile

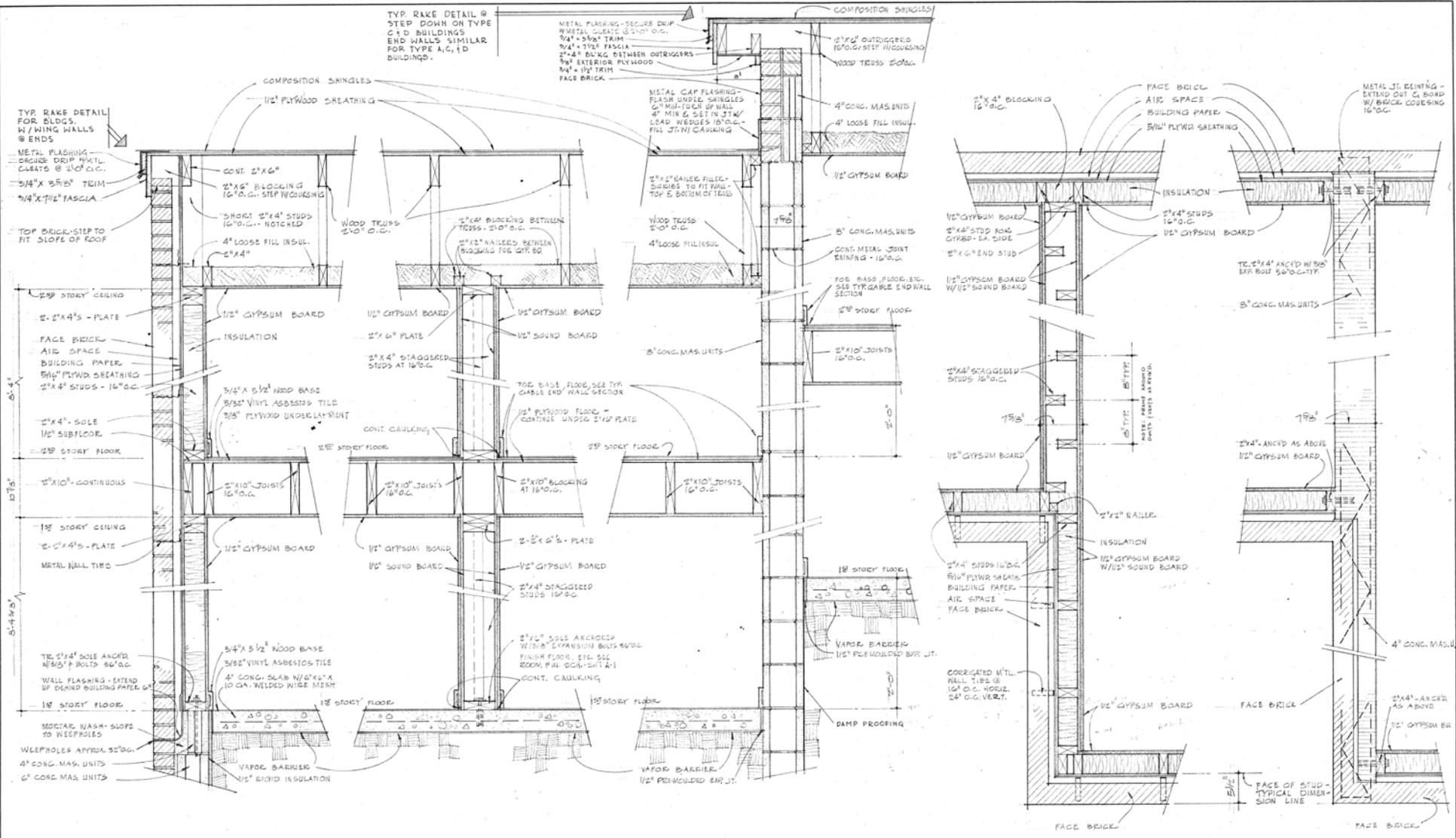
**APPENDIX III**

**SITE OVERVIEW WITH BUILDING NUMBERS & UNIT CROSS-SECTION DRAWING**



NOTES :

PARCEL \*2A



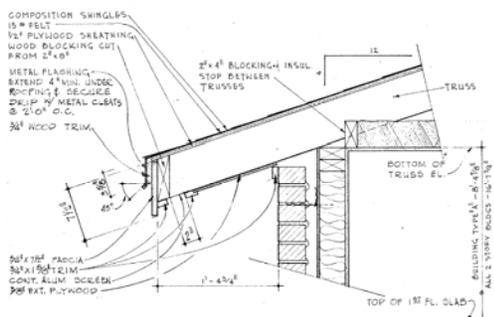
TYPICAL GABLE END WALL SECTION  
SCALE 1/2" = 1'-0"

TYPICAL BETWEEN-UNIT STUD WALL SECTION  
SCALE 1/2" = 1'-0"

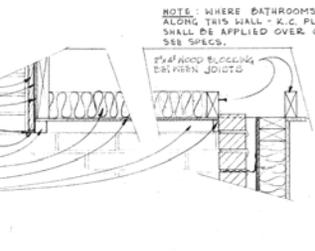
TYPICAL BETWEEN-UNIT MASONRY WALL SECTION  
SCALE 1/2" = 1'-0"

TYPICAL BETWEEN-UNIT STUD WALL PLAN DETAIL  
SCALE 1/2" = 1'-0"

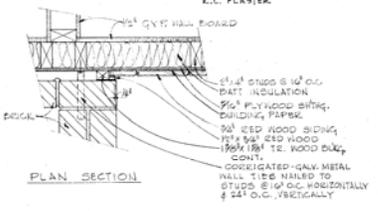
TYPICAL BETWEEN-UNIT MASONRY WALL PLAN DETAIL  
SCALE 1/2" = 1'-0"



TYP. EAVE DETAIL  
SCALE: 1/2" = 1'-0"



TYPICAL FRONT PORCH SOFFIT DETAIL  
SCALE: 1/2" = 1'-0"



TYPICAL WOOD SIDING @ MASONRY DETAIL  
SCALE: 1/2" = 1'-0"

NOTE: WHERE BATHROOMS OCCUR ALONG THIS WALL - K.C. PLASTER SHALL BE APPLIED OVER C.M.U. SEE SPECS.

NOTE: WHERE BATHROOMS OCCUR @ BETWEEN-UNIT STUD WALLS - ELIMINATE SOUND BOARD & GYPSUM BOARD & USE LATH & C. PLASTER.



**APPENDIX IV**

**LABORATORY RESULTS & CHAIN OF CUSTODY**



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703363

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company : Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: <i>Cammie Clagett Building 1,4,5 ext</i>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options\* - Please Check

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Date Sampled: 4-25-17

Samplers Name: *Nicholas Neerhof*      Samplers Signature: *[Signature]*

Sample #	HA #	Sample Location	Material Description
1-76		doors <del>windows</del>	Grey door caulk
1-77			
1-78			
1-79		windows	Black window caulk
1-80			
1-81			
1-82		Brick penetrations	Grey penetration mastic
1-83			
1-84			
4-39		doors	Grey door caulk

Client Sample # (s): 1-76 - 5-38	Total # of Samples:
Relinquished (Client): <i>Nicholas Neerhof</i> Date: 4-27-17	Time:
Received (Lab): <i>[Signature]</i> Date: 4/28/17	Time: 11:00 AM Fk
Comments/Special Instructions: <small>Please utilize positive stop analysis.</small>	7952 7865 6126
<small>Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:</small>	



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703363

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
4-40		doors ↓	Grey door caulk ↓
4-41			
4-42		windows ↓	Black window caulk ↓
4-43			
4-44			
4-45	V-353	windows ↓	Brown caulk (hard) ↓
4-46			
4-47			
4-48		Brick penetrations ↓	Grey penetration mastic ↓
4-49			
4-50			
5-30		<del>windows</del> doors ↓	Grey door caulk ↓
5-31			
5-32			
5-33		windows ↓	Black window caulk ↓
<del>5-34</del>			
5-35			
5-36		Brick penetrations ↓	Grey penetration mastic ↓
5-37			
5-38			

**\*Comments/Special Instructions:**

Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

EMSL Order: 411703363

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/28/2017 11:00 AM

**Analysis Date:** 05/04/2017

**Collected Date:** 04/25/2017

**Project:** Cammie Clagett Building 1, 4, 5 Ext.

## 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
1-76 <small>411703363-0001</small>	Doors - Grey Door Caulk	Gray/White Non-Fibrous Homogeneous	<1% Fibrous (Other)	5% Ca Carbonate 95% Non-fibrous (Other)	<1% Chrysotile
1-77 <small>411703363-0002</small>	Doors - Grey Door Caulk	Gray/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	<1% Chrysotile
1-79 <small>411703363-0003</small>	Windows - Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-80 <small>411703363-0004</small>	Windows - Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-82 <small>411703363-0005</small>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	3% Glass	40% Quartz 5% Ca Carbonate 52% Non-fibrous (Other)	None Detected
1-83 <small>411703363-0006</small>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	5% Glass	35% Quartz 60% Non-fibrous (Other)	None Detected
4-39 <small>411703363-0007</small>	Doors - Grey Door Caulk	Gray/Beige Non-Fibrous Homogeneous	<1% Cellulose <1% Glass	100% Non-fibrous (Other)	None Detected
4-40 <small>411703363-0008</small>	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	3% Glass	5% Quartz 92% Non-fibrous (Other)	None Detected
4-42 <small>411703363-0009</small>	Windows - Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-43 <small>411703363-0010</small>	Windows - Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-45 <small>411703363-0011</small>	U-353 Windows - Brown Caulk (Hard)	Brown Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
4-46 <small>411703363-0012</small>	U-353 Windows - Brown Caulk (Hard)	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-48 <small>411703363-0013</small>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	3% Glass	40% Quartz 5% Ca Carbonate 52% Non-fibrous (Other)	None Detected
4-49 <small>411703363-0014</small>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	5% Glass	35% Quartz 60% Non-fibrous (Other)	None Detected
5-30 <small>411703363-0015</small>	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	<1% Glass	100% Non-fibrous (Other)	None Detected
5-31 <small>411703363-0016</small>	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	4% Glass	96% Non-fibrous (Other)	None Detected

Initial report from: 05/05/2017 07:57:31



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703363  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-33 <i>411703363-0017</i>	Windows - Black Window Caulk	Brown/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-34 <i>411703363-0018</i>	Windows - Black Window Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-36 <i>411703363-0019</i>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	3% Glass	40% Quartz 10% Ca Carbonate 47% Non-fibrous (Other)	None Detected
5-37 <i>411703363-0020</i>	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	8% Glass	35% Quartz 57% Non-fibrous (Other)	None Detected

Analyst(s)

Aaron Hartley (10)

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: 05/05/2017 07:57:31



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703363  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/28/2017 11:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building 1, 4, 5 Ext.

## 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
1-78 411703363-0021	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	92.3	None	7.7% Chrysotile
1-81 411703363-0022	Windows - Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-84 411703363-0023	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	100	None	No Asbestos Detected
4-41 411703363-0024	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	99.8	None	0.23% Chrysotile
4-44 411703363-0025	Windows - Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-47 411703363-0026	U-353 Windows - Brown Caulk (Hard)	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-50 411703363-0027	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	100	None	No Asbestos Detected
5-32 411703363-0028	Doors - Grey Door Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-35 411703363-0029	Windows - Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-38 411703363-0030	Brick Penetrations - Grey Penetration Mastic	Gray Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/10/2017 15:14:00



**EMSL Analytical, Inc.**

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**EMSL Order:** 411703363  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/28/2017 11:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building 1, 4, 5 Ext.

**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
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Analyst(s)

Derrick Young (10)

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: 05/10/2017 15:14:00



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703303

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: Cammie Clagett B-2 and 4 Floors		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input checked="" type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
<b>PLM - Bulk (reporting limit)</b>		<b>TEM - Bulk</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"/> NIOSH 9002 (<1%) <input type="checkbox"/> NY ELAP Method 198.1 (friable in NY) <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY) <input type="checkbox"/> OSHA ID-191 Modified <input type="checkbox"/> Standard Addition Method		<input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1 <input type="checkbox"/> NY ELAP Method 198.4 (TEM) <input type="checkbox"/> Chatfield Protocol (semi-quantitative) <input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2 <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique <input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique Other <input type="checkbox"/>	
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Date Sampled: 4-24-17	
Samplers Name: Nicholas Neerhof		Samplers Signature: <i>[Signature]</i>	
Sample #	HA #	material description <del>Sample Location</del>	Sample Location Material Description
2-14		Top layer - cream speckled 12x12" Floor tile with mastic	Throughout down stairs floors
2-15		Second layer - tan 12"x12" floor tile with mastic	
2-16			
2-17		Top - Cream speckled pattern floor tile with mastic	Throughout upstairs floors
2-18		Second layer under wood - grey floor tile with mastic	
2-19			
4-12		12"x12" tan speckled floor tile with adhesive	Kitchen - 351
4-13		over 12"x12" brown <del>streaked</del> speckled floor tile with mastic	Living room - 355
4-14			Front bedroom - 357
Client Sample # (s): 2-14 - 4-14		Total # of Samples: 9	
Relinquished (Client): Nicholas Neerhof		Date: 4-26-17	Time:
Received (Lab): <i>[Signature]</i>		Date: 4/27/17	Time: 10:00 AM Fx
Comments/Special Instructions: <small>Please utilize positive stop analysis.</small>		7952 7822 3708	
<small>Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:</small>			



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EMSL Order: 411703303

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/27/2017 10:00 AM

**Analysis Date:** 04/27/2017

**Collected Date:** 04/24/2017

**Project:** Cammie Clagett B-2 and 4 Floors

## 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
2-14-White Floor Tile <small>411703303-0001</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-14-Mastic <small>411703303-0001A</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous		5% Ca Carbonate 5% Mica 90% Non-fibrous (Other)	None Detected
2-14-Tan Floor Tile <small>411703303-0001B</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	Tan Fibrous Homogeneous		35% Ca Carbonate 62% Non-fibrous (Other)	3% Chrysotile
2-14-Mastic <small>411703303-0001C</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	Black Fibrous Homogeneous		94% Non-fibrous (Other)	6% Chrysotile
2-15-White Floor Tile <small>411703303-0002</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-15-Mastic <small>411703303-0002A</small>	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 04/27/2017 14:11:50



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**EMSL Order:** 411703303  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-15-Tan Floor Tile  411703303-0002B	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
2-15-Mastic  411703303-0002C	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
2-17-White Floor Tile  411703303-0003	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-17-Mastic  411703303-0003A	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	Yellow Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected
2-17-Gray Floor Tile  411703303-0003B	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	Gray Fibrous Homogeneous		30% Ca Carbonate 66% Non-fibrous (Other)	4% Chrysotile
2-17-Mastic  411703303-0003C	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	Black Fibrous Homogeneous		5% Ca Carbonate 89% Non-fibrous (Other)	6% Chrysotile
2-18-White Floor Tile  411703303-0004	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-18-Mastic  411703303-0004A	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 04/27/2017 14:11:50



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**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-18-Gray Floor Tile  411703303-0004B	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic				Positive Stop (Not Analyzed)
2-18-Mastic  411703303-0004C	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic				Positive Stop (Not Analyzed)
4-12-Tan Floor Tile  411703303-0005	Kitchen - 351 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
4-12-Mastic  411703303-0005A	Kitchen - 351 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous		5% Ca Carbonate 5% Mica 90% Non-fibrous (Other)	None Detected
4-12-Brown Floor Tile  411703303-0005B	Kitchen - 351 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Brown Fibrous Homogeneous		40% Ca Carbonate 57% Non-fibrous (Other)	3% Chrysotile
4-12-Mastic  411703303-0005C	Kitchen - 351 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Black Fibrous Homogeneous		94% Non-fibrous (Other)	6% Chrysotile
4-13-Tan Floor Tile  411703303-0006	Living Room - 355 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
4-13-Mastic  411703303-0006A	Living Room - 355 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 04/27/2017 14:11:50



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**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-13-Brown Floor Tile  411703303-0006B	Living Room - 355 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic				Positive Stop (Not Analyzed)
4-13-Mastic  411703303-0006C	Living Room - 355 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic				Positive Stop (Not Analyzed)

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

Eric Loomis (6)

Lacy Searcy (12)

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: 04/27/2017 14:11:50



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**EMSL Order:** 411703303  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 04/28/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett B-2 and 4 Floors

## 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
2-16-White Floor Tile 411703303-0007	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	White Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
2-16-Mastic 411703303-0008	Throughout Downstairs Floors - Top Layer - Cream Speckled 12"x12" Floor Tile with Mastic/ Second Layer - Tan 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
2-19-White Floor Tile 411703303-0009	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	White Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
2-19-Mastic 411703303-0010	Throughout Upstairs Floors - Top - Cream Speckled Pattern Floor Tile with Mastic/ Second Layer under Wood - Grey Floor Tile with Mastic	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
4-14-Tan Floor Tile 411703303-0011	Front Bedroom - 357 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	White Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
4-14-Mastic 411703303-0012	Front Bedroom - 357 - 12"x12" Tan Speckled Floor Tile with Adhesive over 12"x12" Brown Streaked Floor Tile with Mastic	Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 04/28/2017 14:11:38



**EMSL Analytical, Inc.**

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

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**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 04/28/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett B-2 and 4 Floors

**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
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Analyst(s)

Derrick Young (6)

Lee Plumley, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 04/28/2017 14:11:38

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703308

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: <i>Cammie Clagett Bldg #1</i>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

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

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

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

<p><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p> <p><input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)</p> <p><input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> OSHA ID-191 Modified</p> <p><input type="checkbox"/> Standard Addition Method</p>	<p><b>TEM - Bulk</b></p> <p><input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1</p> <p><input type="checkbox"/> NY ELAP Method 198.4 (TEM)</p> <p><input type="checkbox"/> Chatfield Protocol (semi-quantitative)</p> <p><input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep Technique</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique</p> <p style="text-align: center;"><b>Other</b></p> <p><input type="checkbox"/></p>
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Check For Positive Stop - Clearly Identify Homogenous Group    Date Sampled: *4-24-17*

Samplers Name: *Ted Shultz*    Samplers Signature: *Ted Shultz*

Sample #	HA #	Sample Location	Material Description
1-1		440 - Living Rm	Drywall & Joint compound  ↓  dry wall w/ text. walls & ceilings
1-2		440 - Rear bedroom	
1-3		442 - Kitchen	
1-4		444 - Front bedroom	
1-5		448 - Living Rm closet	
1-6		448 - HVAC & water heater closet	
1-7		450 - middle bedroom	
1-9		446 - kitchen	
1-10		446 - Living Rm	
1-11		446 - front closet	

Client Sample # (s): *1-75*    Total # of Samples: *75*

Relinquished (Client): *Ted Shultz*    Date: *4-26-17*    Time: *10:00 am*

Received (Lab): *Paul Nelson*    Date: *4/27/17*    Time: *10:00 AM F/x*

Comments/Special Instructions: Please utilize positive stop analysis.    *7952 7822 3708*

Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703308

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
1-12		446 - Front bedroom	Dry wall w/ texture
1-13		446 - middle bedroom	walls & ceilings
1-14		440 - Bath rm	Plaster w/ finish over
1-15		444 - Bath rm	unfinished drywall
1-16		446 - Bath rm (no drywall)	↓
1-17		448 - Bath rm	
1-18		450 - Bath rm	
1-19		446 - Bath rm	mastic under shower
1-20		↓	stall ↓
1-21			
1-22		440 - Kitchen	Kitchen counter caulk
1-23		442 - ↓	↓
1-24		450 - ↓	↓
1-25		440 - <del>wh</del> HVAC closet	wht HVAC caulk
1-26		446 - ↓	↓
1-27		450 - ↓	↓
1-28		442 - HVAC closet	yellow HVAC mastic
1-29		448 - ↓	↓
1-30		450 - ↓	↓
1-31		440 - Bath rm	Shower stall caulk
1-32		444 - ↓	↓
1-33		450 - ↓	↓
<del>1-34</del>			
<del>1-35</del>			

**\*Comments/Special Instructions:**

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Sample #	HA #	Sample Location	Material Description
1-34		442 - Bath rm	Fiberglass shower stall
1-35		↓	caulk
1-36		↓	↓
1-37		442 - Kitchen	Mastic under stainless
1-38		↓	backsplash
1-39		↓	↓
1-40		442 - Throughout upstairs	Black cover base
1-41		↓	w/ tar + wht mastic
1-42		↓	↓
1-43		446 - Kitchen	Mastic under stainless
1-44		↓	backsplash
1-45		↓	↓
1-46		446 - Bath rm	Black cover base
1-47		↓	w/ tan mastic
1-48		↓	↓
49 1-49		448 Front bedrm	window caulk
1-50		446 Front bedrm	↓
1-51 A		442 Back bedrm	↓
1-51 B		446 <del>bed</del> front door	door caulk
1-52		446	↓
1-53		446	↓
1-54		440 <del>bed</del> Back bedrm	Window caulk

**\*Comments/Special Instructions:**

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

Sample #	HA #	Sample Location	Material Description
1-55		<del>440</del> 440 - Kitchen	12x12 Tan speckled F.T.
1-56		446 - Living Rm	+ mastic over 12 x 12
1-57		448 - Living Rm	brown speckled F.T. + mastic
1-58		440 - Kitchen	Black coating under
1-59		448 - Kitchen	sink ↓
1-60		446 - Kitchen	↓
1-61		442 - 3 bedrms and	12x12 Grey speckled F.T.
1-62		Hall way top layer	+ mastic ↓
1-63		↓	↓
1-64		442 - Bathrm	Grey square pattern
1-65		↓	vinyl floor w/ mastic
1-66		↓	↓
1-67		442 - Kitchen	white coating under
1-68		444 - ↓	sink
1-69		446 - ↓	↓
1-70		446 - Bath rm	Grey square stone pattern
1-71		top layer	vinyl floor no mastic
1-72		↓	↓
1-73		446 - Bathrm under	Felt paper + cream square
1-74		wood ↓	pattern vinyl floor
1-75		↓	w/ mastic

**\*Comments/Special Instructions:**

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

EMSL Order: 411703308

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/27/2017 10:00 AM

**Analysis Date:** 05/02/2017 - 05/03/2017

**Collected Date:** 04/24/2017

**Project:** Cammie Clagett #1 Building

## 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
1-1-Drywall <small>411703308-0001</small>	440 - Living Room - Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1-1-Joint Compound <small>411703308-0001A</small>	440 - Living Room - Drywall & Joint Compound	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 63% Non-fibrous (Other)	2% Chrysotile
1-1-Tape <small>411703308-0001B</small>	440 - Living Room - Drywall & Joint Compound	Tan Non-Fibrous Homogeneous	100% Cellulose		None Detected
1-2-Drywall <small>411703308-0002</small>	440 - Rear Bedroom - Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-2-Joint Compound <small>411703308-0002A</small>	440 - Rear Bedroom - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-2-Tape <small>411703308-0002B</small>	440 - Rear Bedroom - Drywall & Joint Compound	Tan Non-Fibrous Homogeneous	100% Cellulose		None Detected
1-3-Drywall <small>411703308-0003</small>	442 - Kitchen - Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-3-Joint Compound <small>411703308-0003A</small>	442 - Kitchen - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-3-Tape <small>411703308-0003B</small>	442 - Kitchen - Drywall & Joint Compound	Tan Non-Fibrous Homogeneous	100% Cellulose		None Detected
1-4-Drywall <small>411703308-0004</small>	444 - Front Bedroom - Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-4-Joint Compound <small>411703308-0004A</small>	444 - Front Bedroom - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-4-Tape <small>411703308-0004B</small>	444 - Front Bedroom - Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
1-5-Drywall <small>411703308-0005</small>	448 - Living Room Closet - Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-5-Joint Compound <small>411703308-0005A</small>	448 - Living Room Closet - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-5-Tape <small>411703308-0005B</small>	448 - Living Room Closet - Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
1-6-Drywall <small>411703308-0006</small>	448 - HVAC & Water Heater Closet - Drywall & Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 12:53:17



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376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-6-Joint Compound 411703308-0006A	448 - HVAC & Water Heater Closet - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-6-Tape 411703308-0006B	448 - HVAC & Water Heater Closet - Drywall & Joint Compound	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
1-7-Drywall 411703308-0007	450 - Middle Bedroom - Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1-7-Joint Compound 411703308-0007A	450 - Middle Bedroom - Drywall & Joint Compound				Positive Stop (Not Analyzed)
1-7-Tape 411703308-0007B	450 - Middle Bedroom - Drywall & Joint Compound	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
1-9-Drywall 411703308-0008	446 - Kitchen - Drywall w/ Text. Walls & Ceilings	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-9-Joint Compound 411703308-0008A	446 - Kitchen - Drywall w/ Text. Walls & Ceilings	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 63% Non-fibrous (Other)	2% Chrysotile
1-9-Tape 411703308-0008B	446 - Kitchen - Drywall w/ Text. Walls & Ceilings	Tan Fibrous Homogeneous	100% Cellulose		None Detected
1-9-Texture 411703308-0008C	446 - Kitchen - Drywall w/ Text. Walls & Ceilings	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 57% Non-fibrous (Other)	3% Chrysotile
1-10-Drywall 411703308-0009	446 - Living Room - Drywall w/ Text. Walls & Ceilings	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-10-Joint Compound 411703308-0009A	446 - Living Room - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-10-Texture 411703308-0009B	446 - Living Room - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-11-Drywall 411703308-0010	446 - Front Closet - Drywall w/ Text. Walls & Ceilings	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1-11-Joint Compound 411703308-0010A	446 - Front Closet - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-11-Tape 411703308-0010B	446 - Front Closet - Drywall w/ Text. Walls & Ceilings	Tan Fibrous Homogeneous	100% Cellulose		None Detected
1-11-Texture 411703308-0010C	446 - Front Closet - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-12-Drywall 411703308-0011	446 - Front Bedroom - Drywall w/ Text. Walls & Ceilings	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-12-Joint Compound 411703308-0011A	446 - Front Bedroom - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)

Initial report from: 05/03/2017 12:53:17



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**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-12-Tape <small>411703308-0011B</small>	446 - Front Bedroom - Drywall w/ Text. Walls & Ceilings	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
1-12-Texture <small>411703308-0011C</small>	446 - Front Bedroom - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-13-Drywall <small>411703308-0012</small>	446 - Middle Bedroom - Drywall w/ Text. Walls & Ceilings	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1-13-Joint Compound <small>411703308-0012A</small>	446 - Middle Bedroom - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-13-Tape <small>411703308-0012B</small>	446 - Middle Bedroom - Drywall w/ Text. Walls & Ceilings	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
1-13-Texture <small>411703308-0012C</small>	446 - Middle Bedroom - Drywall w/ Text. Walls & Ceilings				Positive Stop (Not Analyzed)
1-14-Skim Coat <small>411703308-0013</small>	440 - Bathroom - Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-14-Rough Coat <small>411703308-0013A</small>	440 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-14-Drywall <small>411703308-0013B</small>	440 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1-15-Skim Coat <small>411703308-0014</small>	444 - Bathroom - Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-15-Rough Coat <small>411703308-0014A</small>	444 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1-15-Drywall <small>411703308-0014B</small>	444 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1-16-Skim Coat <small>411703308-0015</small>	446 - Bathroom (No Drywall) - Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-16-Rough Coat <small>411703308-0015A</small>	446 - Bathroom (No Drywall) - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1-17-Drywall <small>411703308-0016</small>	448 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1-17-Skim Coat <small>411703308-0016A</small>	448 - Bathroom - Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-17-Rough Coat <small>411703308-0016B</small>	448 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1-18-Drywall <small>411703308-0017</small>	450 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

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**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-18-Skim Coat <small>411703308-0017A</small>	450 - Bathroom - Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-18-Rough Coat <small>411703308-0017B</small>	450 - Bathroom - Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-19 <small>411703308-0018</small>	446 - Bathroom - Mastic under Shower Stall	Tan Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-20 <small>411703308-0019</small>	446 - Bathroom - Mastic under Shower Stall	Tan Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-22-Caulk <small>411703308-0020</small>	440 - Kitchen - Kitchen Counter Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-22-Black Layer <small>411703308-0020A</small>	440 - Kitchen - Kitchen Counter Caulk	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1-23 <small>411703308-0021</small>	442 - Kitchen - Kitchen Counter Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-25 <small>411703308-0022</small>	440 - HVAC Closet - Wht HVAC Caulk	Tan/White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
1-26 <small>411703308-0023</small>	446 - HVAC Closet - Wht HVAC Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-28 <small>411703308-0024</small>	442 - HVAC Closet - Yellow HVAC Mastic	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-29 <small>411703308-0025</small>	448 - HVAC Closet - Yellow HVAC Mastic	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-31 <small>411703308-0026</small>	440 - Bathroom - Shower Stall Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-32 <small>411703308-0027</small>	444 - Bathroom - Shower Stall Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-34 <small>411703308-0028</small>	442 - Bathroom - Fiberglass Shower Stall Caulk	White Non-Fibrous Homogeneous		25% Ca Carbonate 75% Non-fibrous (Other)	None Detected
1-35 <small>411703308-0029</small>	442 - Bathroom - Fiberglass Shower Stall Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
1-37 <small>411703308-0030</small>	442 - Kitchen - Mastic under Stainless Backsplash	Tan Non-Fibrous Homogeneous	2% Cellulose	8% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-38 <small>411703308-0031</small>	442 - Kitchen - Mastic under Stainless Backsplash	Tan Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-40-Cove Base <small>411703308-0032</small>	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

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**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-40-Mastic <small>411703308-0032A</small>	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Tan Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-41-Cove Base <small>411703308-0033</small>	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Black Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-41-Mastic <small>411703308-0033A</small>	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-43 <small>411703308-0034</small>	446 - Kitchen - Mastic under Stainless Backsplash	Beige Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
1-44 <small>411703308-0035</small>	446 - Kitchen - Mastic under Stainless Backsplash	Beige Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-46-Cove Base <small>411703308-0036</small>	446 - Bathroom - Black Cove Base w/ Tan Mastic	Black Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-46-Mastic <small>411703308-0036A</small>	446 - Bathroom - Black Cove Base w/ Tan Mastic	Beige Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-47-Cove Base <small>411703308-0037</small>	446 - Bathroom - Black Cove Base w/ Tan Mastic	Black Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-47-Mastic <small>411703308-0037A</small>	446 - Bathroom - Black Cove Base w/ Tan Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-49 <small>411703308-0038</small>	448 - Front Bedroom - Window Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-50 <small>411703308-0039</small>	446 - Front Bedroom - Window Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1-51B <small>411703308-0040</small>	446 - Front Door - Door Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-52 <small>411703308-0041</small>	446 - Front Door - Door Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-54 <small>411703308-0042</small>	440 - Back Bedroom - Window Caulk	White/Black Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1-55- Tan Floor Tile <small>411703308-0043</small>	440 - Kitchen - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
1-55-Mastic <small>411703308-0043A</small>	440 - Kitchen - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 93% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 12:53:17



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-55-Brown Floor Tile <small>411703308-0043B</small>	440 - Kitchen - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Brown Non-Fibrous Homogeneous		35% Ca Carbonate 62% Non-fibrous (Other)	3% Chrysotile
1-55-Mastic <small>411703308-0043C</small>	440 - Kitchen - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Black Non-Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 90% Non-fibrous (Other)	3% Chrysotile
1-56-Tan Floor Tile <small>411703308-0044</small>	446 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1-56-Mastic <small>411703308-0044A</small>	446 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-56-Brown Floor Tile <small>411703308-0044B</small>	446 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic				Positive Stop (Not Analyzed)
1-56-Mastic <small>411703308-0044C</small>	446 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic				Positive Stop (Not Analyzed)
1-58 <small>411703308-0045</small>	440 - Kitchen - Black Coating under Sink	Black Non-Fibrous Homogeneous		8% Ca Carbonate 89% Non-fibrous (Other)	3% Chrysotile
1-59 <small>411703308-0046</small>	448 - Kitchen - Black Coating under Sink				Positive Stop (Not Analyzed)
1-61-Floor Tile <small>411703308-0047</small>	442 - 3 Bedrooms and Hallway Top Layer - 12x12 Grey Speckled F.T. & Mastic	Gray Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1-61-Mastic <small>411703308-0047A</small>	442 - 3 Bedrooms and Hallway Top Layer - 12x12 Grey Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous	3% Cellulose	5% Ca Carbonate 92% Non-fibrous (Other)	None Detected
1-62-Floor Tile <small>411703308-0048</small>	442 - 3 Bedrooms and Hallway Top Layer - 12x12 Grey Speckled F.T. & Mastic	Gray Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1-62-Mastic <small>411703308-0048A</small>	442 - 3 Bedrooms and Hallway Top Layer - 12x12 Grey Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 12:53:17



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**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-64-Flooring <small>411703308-0049</small>	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	Gray Non-Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
1-64-Mastic <small>411703308-0049A</small>	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1-65-Flooring <small>411703308-0050</small>	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	Gray Fibrous Homogeneous	15% Cellulose	8% Ca Carbonate 77% Non-fibrous (Other)	None Detected
1-65-Mastic <small>411703308-0050A</small>	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-67 <small>411703308-0051</small>	442 - Kitchen - White Coating under Sink	White Non-Fibrous Homogeneous	3% Cellulose	10% Ca Carbonate 87% Non-fibrous (Other)	None Detected
1-68 <small>411703308-0052</small>	444 - Kitchen - White Coating under Sink	Tan Fibrous Homogeneous	8% Cellulose	10% Ca Carbonate 8% Mica 74% Non-fibrous (Other)	None Detected
1-70 <small>411703308-0053</small>	446 - Bathroom - Top Layer - Grey Square Stone Pattern Vinyl Floor, No Mastic	Gray Fibrous Homogeneous	3% Glass	10% Ca Carbonate 87% Non-fibrous (Other)	None Detected
1-71 <small>411703308-0054</small>	446 - Bathroom - Top Layer - Grey Square Stone Pattern Vinyl Floor, No Mastic	Gray Fibrous Homogeneous	4% Glass	96% Non-fibrous (Other)	None Detected
1-73-Flooring <small>411703308-0055</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Beige Non-Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
1-73-Mastic <small>411703308-0055A</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1-73-Felt <small>411703308-0055B</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
1-74-Flooring <small>411703308-0056</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Tan Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
1-74-Mastic <small>411703308-0056A</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Tan Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1-74-Felt <small>411703308-0056B</small>	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 12:53:17



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376 Crompton Street Charlotte, NC 28273

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

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

EMSL Order: 411703308

Customer ID: AXEM25

Customer PO:

Project ID:

Analyst(s)

*Anupriya Tyagi (39)*

*Lytterra Barrow (56)*

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: 05/03/2017 12:53:17



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/09/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett #1 Building

## 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
1-21 411703308-0057	446 - Bathroom - Mastic under Shower Stall	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-24-Caulk 411703308-0058	450 - Kitchen - Kitchen Counter Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-24-Black Layer 411703308-0059	450 - Kitchen - Kitchen Counter Caulk	Black Non-Fibrous Homogeneous	99.2	0.78 Fibrous_Other	No Asbestos Detected
1-27 411703308-0060	450 - HVAC Closet - Wht HVAC Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-30 411703308-0061	450 - HVAC Closet - Yellow HVAC Mastic	Yellow Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-33 411703308-0062	450 - Bathroom - Shower Stall Caulk	White Non-Fibrous Homogeneous	99.8	0.23 Fibrous_Other	No Asbestos Detected
1-36 411703308-0063	442 - Bathroom - Fiberglass Shower Stall Caulk	White Non-Fibrous Homogeneous	100	<0.1 Fibrous_Other	No Asbestos Detected
1-39 411703308-0064	442 - Kitchen - Mastic under Stainless Backsplash	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-42-Cove Base 411703308-0065	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-42-Mastic 411703308-0066	442 - Throughout Upstairs - Black Cove Base w/ Tar & Wht Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-45 411703308-0067	446 - Kitchen - Mastic under Stainless Backsplash	Beige Non-Fibrous Homogeneous	100	<0.1 Fibrous_Other	No Asbestos Detected
1-48-Cove Base 411703308-0068	446 - Bathroom - Black Cove Base w/ Tan Mastic	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/09/2017 12:31:41



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/09/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett #1 Building

## 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
1-48-Mastic 411703308-0069	446 - Bathroom - Black Cove Base w/ Tan Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-51A 411703308-0070	442 - Back Bedroom - Window Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-53 411703308-0071	446 - Front Door - Door Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-57-Tan Floor Tile 411703308-0072	448 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-57-Mastic 411703308-0073	448 - Living Room - 12x12 Tan Speckled F.T. & Mastic over 12x12 Brown Speckled F.T. & Mastic	Brown Non-Fibrous Homogeneous	100	<0.57 Fibrous_Other	No Asbestos Detected
1-63-Floor Tile 411703308-0074	442 - 3 Bedrooms and Hallway - Top Layer - 12x12 Grey Speckled F.T. & Mastic	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-63-Mastic 411703308-0075	442 - 3 Bedrooms and Hallway - Top Layer - 12x12 Grey Speckled F.T. & Mastic	Tan Non-Fibrous Homogeneous	100	<0.40 Fibrous_Other	No Asbestos Detected
1-66-Flooring 411703308-0076	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	Gray Fibrous Homogeneous	100	None	No Asbestos Detected
1-66-Mastic 411703308-0077	442 - Bathroom - Grey Square Pattern Vinyl Floor w/ Mastic	White/Yellow Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-69 411703308-0078	446 - Kitchen - White Coating under Sink	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-72 411703308-0079	446 - Top Layer - Grey Square Stone Pattern Vinyl Floor, No Mastic	Brown/Gray Fibrous Homogeneous	100	None	No Asbestos Detected
1-75-Flooring 411703308-0080	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Beige Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/09/2017 12:31:41



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703308  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/09/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett #1 Building

## 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
1-75-Mastic 411703308-0081	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
1-75-Felt 411703308-0082	446 - Bathroom under Wood - Felt Paper & Cream Square Pattern Vinyl Floor w/ Mastic	Black Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Aaron Hartley (26)

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: 05/09/2017 12:31:41



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LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7749

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolover@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 1		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different - If Bill to is Different note instructions in Comments** <i>Third Party Billing requires written authorization from third party</i>			
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour
<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input checked="" type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
<small>*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	
<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"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)		<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	
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name: Tom Oliver		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1- 85	Roof shingles (3) + felt (1)	PLM	
1- 86	jamming	PLM	
1- 87		TEM	
Client Sample # (s): 85-87 + <del>88-90</del> 91-105		Total # of Samples: 18/18	
Relinquished (Client):		Date: 12-4-17	Time:
Received (Lab):		Date: 12/6/17	Time: 9am
Comments/Special Instructions: ⑥ EFX 795379784183			



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

7749

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1- 88	Sample #'s not used		
89	↓		
90	↓		
91	Flashing & awning caulk	PLM	
92	↓	TEM	
93	↓	TEM	
94	Roof gable vent caulk - white	PLM	
95	& gray	↓	
96	↓	TEM	
97	Paint coated metal - vent pipes	PLM	
98	↓	↓	
99	↓	↓	
100	Black & gray mastic on roof	PLM	
101	penetrations	↓	
102	↓	TEM	
103	HVAC tape w/ mastic	PLM	
104	↓	↓	
105	↓	TEM	
*Comments/Special Instructions:			



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707770

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/13/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 38

## 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
38-1-Drywall <small>021707770-0001</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-1-Joint Compound <small>021707770-0001A</small>	Drywall/Joint Compound/Tape	Beige Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 66% Non-fibrous (Other)	3% Chrysotile
38-2-Drywall <small>021707770-0002</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-2-Joint Compound <small>021707770-0002A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-3-Drywall <small>021707770-0003</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-3-Joint Compound <small>021707770-0003A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-4-Drywall <small>021707770-0004</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-4-Joint Compound <small>021707770-0004A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-5-Drywall <small>021707770-0005</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-5-Joint Compound <small>021707770-0005A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-6-Drywall <small>021707770-0006</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-6-Joint Compound <small>021707770-0006A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-7-Drywall <small>021707770-0007</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-7-Joint Compound <small>021707770-0007A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-8-Skim Coat <small>021707770-0008</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-8-Rough Coat <small>021707770-0008A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected

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Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-8-Drywall <small>021707770-0008B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-9-Skim Coat <small>021707770-0009</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-9-Rough Coat <small>021707770-0009A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
38-9-Drywall <small>021707770-0009B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
38-10-Skim Coat <small>021707770-0010</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-10-Rough Coat <small>021707770-0010A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
38-10-Drywall <small>021707770-0010B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-11-Texture <small>021707770-0011</small>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
38-11-Skim Coat <small>021707770-0011A</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-11-Rough Coat <small>021707770-0011B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
38-11-Drywall <small>021707770-0011C</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-12-Skim Coat <small>021707770-0012</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
38-12-Rough Coat <small>021707770-0012A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
38-12-Drywall <small>021707770-0012B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-13-Floor Tile <small>021707770-0013</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-13-Mastic <small>021707770-0013A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-14-Floor Tile <small>021707770-0014</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-14-Mastic <small>021707770-0014A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-16-Floor Tile <small>021707770-0016</small>	12x12 Cream Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected

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Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-16-Mastic <small>021707770-0016A</small>	12x12 Cream Floor Tile/Mastic	Black/Yellow Non-Fibrous Heterogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-17-Floor Tile <small>021707770-0017</small>	12x12 Cream Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-17-Mastic <small>021707770-0017A</small>	12x12 Cream Floor Tile/Mastic				Positive Stop (Not Analyzed)
38-19-Floor Tile <small>021707770-0019</small>	12x12 Beige Floor Tile/Mastic	Tan/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-19-Mastic <small>021707770-0019A</small>	12x12 Beige Floor Tile/Mastic	Black/Gold/Orange Non-Fibrous Heterogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	<1% Chrysotile
38-20-Floor Tile <small>021707770-0020</small>	12x12 Beige Floor Tile/Mastic	Tan/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-20-Mastic <small>021707770-0020A</small>	12x12 Beige Floor Tile/Mastic	Black/Orange Non-Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-22-Floor Tile <small>021707770-0022</small>	12x12 Light Tan Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-22-Mastic <small>021707770-0022A</small>	12x12 Light Tan Floor Tile/Mastic	Yellow/Gold Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-23-Floor Tile <small>021707770-0023</small>	12x12 Light Tan Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-23-Mastic <small>021707770-0023A</small>	12x12 Light Tan Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-24-B <small>021707770-0025</small>	Bathroom Sink Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-25 <small>021707770-0026</small>	Bathroom Sink Caulk	Tan/White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-27 <small>021707770-0028</small>	Shower Stall Caulk	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-28 <small>021707770-0029</small>	Shower Stall Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-30 <small>021707770-0031</small>	Kitchen Counter Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-31 <small>021707770-0032</small>	Kitchen Counter Caulk	Tan/Beige Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-33-Caulk <small>021707770-0034</small>	HVAC Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-33-Joint Compound <small>021707770-0034A</small>	HVAC Caulk	Tan Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 66% Non-fibrous (Other)	3% Chrysotile

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**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-34 <small>021707770-0035</small>	HVAC Caulk	Tan/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-36-Tape <small>021707770-0037</small>	HVAC Tape/Mastic	Gray/Tan/Silver Fibrous Heterogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
38-36-Mastic <small>021707770-0037A</small>	HVAC Tape/Mastic	Tan/Yellow/Gold Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-37-Tape <small>021707770-0038</small>	HVAC Tape/Mastic	Gray/Tan/Silver Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-37-Mastic <small>021707770-0038A</small>	HVAC Tape/Mastic	Yellow/Gold Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-39 <small>021707770-0040</small>	Black Sink Coating	Black Non-Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-40 <small>021707770-0041</small>	Black Sink Coating				Positive Stop (Not Analyzed)
38-42 <small>021707770-0043</small>	Interior Window Caulk-White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-43 <small>021707770-0044</small>	Interior Window Caulk-White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-45-Shingle 1 <small>021707770-0046</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Shingle 2 <small>021707770-0046A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Shingle 3 <small>021707770-0046B</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Felt <small>021707770-0046C</small>	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-46-Shingle 1 <small>021707770-0047</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Shingle 2 <small>021707770-0047A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Shingle 3 <small>021707770-0047B</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Felt <small>021707770-0047C</small>	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-48 <small>021707770-0049</small>	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-49 <small>021707770-0050</small>	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-51 <small>021707770-0052</small>	Black Mastic on Roof Penetrations	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-52 <small>021707770-0053</small>	Black Mastic on Roof Penetrations	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-57 <small>021707770-0055</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-58 <small>021707770-0056</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-60 <small>021707770-0058</small>	Interior/Exterior Brown Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-61 <small>021707770-0059</small>	Interior/Exterior Brown Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-63 <small>021707770-0061</small>	Door Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-64 <small>021707770-0062</small>	Door Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-66 <small>021707770-0064</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-67 <small>021707770-0065</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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

James Cole (26)  
Scott Combs (49)

Stephen Bennett, Laboratory Manager  
or Other Approved Signatory

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

Initial report from: 12/13/2017 10:40:45



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706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
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**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/13/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 38

## 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
38-15-Floor Tile 021707770-0015	12x12 Tan Speckled Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-15-Mastic 021707770-0015A	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-18-Floor Tile 021707770-0018	12x12 Cream Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-18-Mastic 021707770-0018A	12x12 Cream Floor Tile/Mastic				
Positive Stop (Not Analyzed)					
38-21-Floor Tile 021707770-0021	12x12 Beige Floor Tile/Mastic	Tan/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-21-Mastic 021707770-0021A	12x12 Beige Floor Tile/Mastic				
Positive Stop (Not Analyzed)					
38-24A-Floor Tile 021707770-0024	12x12 Light Tan Floor Tile/Mastic	Gray/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-24A-Mastic 021707770-0024A	12x12 Light Tan Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-26 021707770-0027	Bathroom Sink Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-29 021707770-0030	Shower Stall Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-32 021707770-0033	Kitchen Counter Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-35 021707770-0036	HVAC Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/13/2017 10:40:42



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/13/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 38

## 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
38-38-Tape 021707770-0039	HVAC Tape/Mastic	Silver Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-38-Mastic 021707770-0039A	HVAC Tape/Mastic	Beige Fibrous Heterogeneous	100	None	No Asbestos Detected
38-41 021707770-0042	Black Sink Coating				
Positive Stop (Not Analyzed)					
38-44 021707770-0045	Interior Window Caulk-White	White Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
38-47-Shingle 1 021707770-0048	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
38-47-Shingle 2 021707770-0048A	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
38-47-Shingle 3 021707770-0048B	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
38-47-Felt 021707770-0048C	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
38-50 021707770-0051	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-53 021707770-0054	Black Mastic on Roof Penetrations	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-59 021707770-0057	Awning/Flashing Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
38-62 021707770-0060	Interior/Exterior Brown Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/13/2017 10:40:42



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Tel/Fax: (336) 992-1025 / (336) 992-4175  
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**EMSL Order:** 021707770  
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Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/13/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 38

## 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
38-65 021707770-0063	Door Caulk	Gray/Tan Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
38-68 021707770-0066	Roof Goble Vent Caulk	Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (23)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

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EMSL Analytical, Inc.  
376 Crompton Street



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LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703312

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: Cammie Clagett Building 2		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

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

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

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

<p style="text-align: center;"><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric <input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p> <p><input type="checkbox"/> NY ELAP Method 198.1 (friable in NY)</p> <p><input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> OSHA ID-191 Modified</p> <p><input type="checkbox"/> Standard Addition Method</p>	<p style="text-align: center;"><b>TEM - Bulk</b></p> <p><input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1</p> <p><input type="checkbox"/> NY ELAP Method 198.4 (TEM)</p> <p><input type="checkbox"/> Chatfield Protocol (semi-quantitative)</p> <p><input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep Technique</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique</p> <p style="text-align: center;"><b>Other</b></p> <p><input type="checkbox"/></p>
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Check For Positive Stop - Clearly Identify Homogenous Group    Date Sampled: 4-24-17

Samplers Name: Nicholas Neerhof    Samplers Signature:

Sample #	HA #	Sample Location	Material Description
2-1		interior metal window casings	Black caulk
2-2			
2-3			
2-4		wooden door casings - exterior	Grey caulk
2-5			
2-6			
2-7		kitchen counter	white caulk
2-8			
2-9			
2-10		kitchen sink	Black coatings on sink

Client Sample # (s): 2-1 - 2-62    Total # of Samples: 56

Relinquished (Client): Date: 4-26-17    Time: 10:00am

Received (Lab): Date: 4/27/17    Time: 10:00am Fk

Comments/Special Instructions: 7952 7822 3693  
Please utilize positive stop analysis.

Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703312

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
2-11		Kitchen sink ↓	Black coating on sink ↓
2-13			
2-20		HVAC system closet ↓	Hvac mastic
2-21			
2-22			
2-23		throughout interior ↓	Drywall, JC and tape ↓
2-24			
2-25			
2-26			
2-27			
2-28			
2-29			
2-30		under kitchen sink ↓	white coating on sink ↓
2-31			
2-32			
2-33		exterior window casings ↓	Black caulk ↓
2-34		metal	
2-35			
2-36		Kitchen ↓	white mastic on back splash ↓
2-37			
2-38			
2-39		Kitchen ↓	wall covering behind back splash ↓
2-40			
2-41			

**\*Comments/Special Instructions:**

Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



EMSL ANALYTICAL, INC.  
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**Asbestos Bulk Building Material  
Chain of Custody**

EMSL Order Number (Lab Use Only):

41170 3312

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
2-42		upstairs bathroom floor	Large Square rock pattern
2-43		↓	vinyl floor w/ mastic
2-44		↓	↓
2-45		upstairs bathroom	Bathroom stall plastic
2-46		↓	w/ mastic
2-47		↓	↓
2-48		upstairs bathroom	Tan large square pattern
2-49		↓	vinyl floor w/ mastic
2-50		↓	↓
2-51		upstairs bathroom	cove. base mastic
2-52		↓	↓
2-53		↓	↓
2-54		upstairs bathroom	plaster w/ finish
2-55		↓	↓
2-56		↓	↓
2-57		<del>upstairs</del> bathroom shower	white caulk
2-58		stall ↓	↓
2-59		↓	↓
2-60		exterior <del>brick</del> brick	grey penetration caulk
2-61		penetration by awning	↓
2-62		↓	↓

**\*Comments/Special Instructions:**

Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

<b>EMSL Order:</b> 411703312
<b>Customer ID:</b> AXEM25
<b>Customer PO:</b>
<b>Project ID:</b>

<b>Attention:</b> Nicholas Neerhof Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	<b>Phone:</b> (864) 640-5274 <b>Fax:</b> <b>Received Date:</b> 04/27/2017 10:00 AM <b>Analysis Date:</b> 05/02/2017 - 05/03/2017 <b>Collected Date:</b> 04/24/2017
<b>Project:</b> Cammie Clagett Building #2	

## 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
2-1 411703312-0001	Interior Metal Window Casings - Black Caulk	Tan/Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-2 411703312-0002	Interior Metal Window Casings - Black Caulk	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-4 411703312-0003	Wooden Door Casings - Exterior - Grey Caulk	Gray Fibrous Homogeneous		97% Non-fibrous (Other)	3% Chrysotile
2-5 411703312-0004	Wooden Door Casings - Exterior - Grey Caulk				Positive Stop (Not Analyzed)
2-7 411703312-0005	Kitchen Counter - White Caulk	Tan/White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-8 411703312-0006	Kitchen Counter - White Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-10 411703312-0007	Kitchen Sink - Black Coating on Sink	Black Fibrous Homogeneous		30% Ca Carbonate 66% Non-fibrous (Other)	4% Chrysotile
2-11 411703312-0008	Kitchen Sink - Black Coating on Sink				Positive Stop (Not Analyzed)
2-20 411703312-0009	HVAC System Closet - HVAC Mastic	Tan/White Fibrous Homogeneous		25% Ca Carbonate 70% Non-fibrous (Other)	5% Chrysotile
2-21 411703312-0010	HVAC System Closet - HVAC Mastic				Positive Stop (Not Analyzed)
2-23-Drywall 411703312-0011 No tape present	Throughout Interior - Drywall, JC and Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-23-Joint Compound 411703312-0011A	Throughout Interior - Drywall, JC and Tape	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	<1% Chrysotile
2-24-Drywall 411703312-0012 No tape present	Throughout Interior - Drywall, JC and Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-24-Joint Compound 411703312-0012A	Throughout Interior - Drywall, JC and Tape	Tan Fibrous Homogeneous		35% Ca Carbonate 63% Non-fibrous (Other)	2% Chrysotile
2-25-Drywall 411703312-0013	Throughout Interior - Drywall, JC and Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 08:00:17



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376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703312  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-25-Joint Compound <i>411703312-0013A</i>	Throughout Interior - Drywall, JC and Tape				Positive Stop (Not Analyzed)
2-25-Tape <i>411703312-0013B</i>	Throughout Interior - Drywall, JC and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
2-26-Drywall <i>411703312-0014</i> <i>No tape present</i>	Throughout Interior - Drywall, JC and Tape	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-26-Joint Compound <i>411703312-0014A</i>	Throughout Interior - Drywall, JC and Tape				Positive Stop (Not Analyzed)
2-27-Drywall <i>411703312-0015</i>	Throughout Interior - Drywall, JC and Tape	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-27-Joint Compound <i>411703312-0015A</i>	Throughout Interior - Drywall, JC and Tape				Positive Stop (Not Analyzed)
2-28-Drywall <i>411703312-0016</i> <i>No tape present</i>	Throughout Interior - Drywall, JC and Tape	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-28-Joint Compound <i>411703312-0016A</i>	Throughout Interior - Drywall, JC and Tape				Positive Stop (Not Analyzed)
2-29-Drywall <i>411703312-0017</i> <i>No joint compound/tape present</i>	Throughout Interior - Drywall, JC and Tape	Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-30 <i>411703312-0018</i>	Under Kitchen Sink - White Coating on Sink	White Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
2-31 <i>411703312-0019</i>	Under Kitchen Sink - White Coating on Sink	White Non-Fibrous Homogeneous	5% Cellulose	5% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-33 <i>411703312-0020</i>	Exterior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-34 <i>411703312-0021</i>	Exterior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-36 <i>411703312-0022</i>	Kitchen - White Mastic on Backsplash	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-37 <i>411703312-0023</i>	Kitchen - White Mastic on Backsplash	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
2-39-Drywall <i>411703312-0024</i>	Kitchen - Wall Covering behind Backsplash	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-39-Joint Compound <i>411703312-0024A</i>	Kitchen - Wall Covering behind Backsplash	White Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
2-39-Tape <i>411703312-0024B</i>	Kitchen - Wall Covering behind Backsplash	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 08:00:17



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**EMSL Order:** 411703312  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-40-Drywall <small>411703312-0025</small>	Kitchen - Wall Covering behind Backsplash	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
2-40-Joint Compound <small>411703312-0025A</small>	Kitchen - Wall Covering behind Backsplash				Positive Stop (Not Analyzed)
2-40-Tape <small>411703312-0025B</small>	Kitchen - Wall Covering behind Backsplash	Tan Fibrous Homogeneous	95% Cellulose	5% Non-fibrous (Other)	None Detected
2-41-Drywall <small>411703312-0026</small>	Kitchen - Wall Covering behind Backsplash	Brown/Gray Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-41-Joint Compound <small>411703312-0026A</small>	Kitchen - Wall Covering behind Backsplash				Positive Stop (Not Analyzed)
2-41-Tape <small>411703312-0026B</small>	Kitchen - Wall Covering behind Backsplash	Tan Fibrous Homogeneous	100% Cellulose		None Detected
2-42-Flooring <small>411703312-0027</small>	Upstairs Bathroom Floor - Large Square Rock Pattern Vinyl Floor w/ Mastic	White Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-42-Mastic <small>411703312-0027A</small>	Upstairs Bathroom Floor - Large Square Rock Pattern Vinyl Floor w/ Mastic	Tan/Clear Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-43 <small>411703312-0028</small>	Upstairs Bathroom Floor - Large Square Rock Pattern Vinyl Floor w/ Mastic				Not Submitted
2-45-Flooring <small>411703312-0029</small>	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
2-45-Mastic <small>411703312-0029A</small>	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	Tan Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-46-Flooring <small>411703312-0030</small>	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	White/Beige Fibrous Homogeneous	3% Glass	8% Ca Carbonate 89% Non-fibrous (Other)	None Detected
2-46-Mastic <small>411703312-0030A</small>	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-48-Flooring <small>411703312-0031</small>	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Fibrous Homogeneous	4% Cellulose	5% Ca Carbonate 91% Non-fibrous (Other)	None Detected
2-48-Mastic <small>411703312-0031A</small>	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
2-49-Flooring <small>411703312-0032</small>	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-49-Mastic <small>411703312-0032A</small>	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

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**EMSL Order:** 411703312  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-51-Cove Base <small>411703312-0033</small>	Upstairs Bathroom - Cove Base Mastic	Black Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-51-Mastic <small>411703312-0033A</small>	Upstairs Bathroom - Cove Base Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-52-Cove Base <small>411703312-0034</small>	Upstairs Bathroom - Cove Base Mastic	Black Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-52-Mastic <small>411703312-0034A</small>	Upstairs Bathroom - Cove Base Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-54-Skim Coat <small>411703312-0035</small>	Upstairs Bathroom - Plaster w/ Finish	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-54-Rough Coat <small>411703312-0035A</small>	Upstairs Bathroom - Plaster w/ Finish	Gray Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
2-54-Drywall <small>411703312-0035B</small>	Upstairs Bathroom - Plaster w/ Finish	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-55-Skim Coat <small>411703312-0036</small>	Upstairs Bathroom - Plaster w/ Finish	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-55-Rough Coat <small>411703312-0036A</small>	Upstairs Bathroom - Plaster w/ Finish	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected
2-55-Drywall <small>411703312-0036B</small>	Upstairs Bathroom - Plaster w/ Finish	Brown Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
2-56-Skim Coat <small>411703312-0037</small>	Upstairs Bathroom - Plaster w/ Finish	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
2-56-Rough Coat <small>411703312-0037A</small>	Upstairs Bathroom - Plaster w/ Finish	Gray Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
2-56-Drywall <small>411703312-0037B</small>	Upstairs Bathroom - Plaster w/ Finish	Brown/Gray Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
2-57 <small>411703312-0038</small>	Bathroom Shower Stall - White Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-58 <small>411703312-0039</small>	Bathroom Shower Stall - White Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-60 <small>411703312-0040</small>	Exterior Brick Penetration by Awning - Grey Penetration Caulk	Gray Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
2-61 <small>411703312-0041</small>	Exterior Brick Penetration by Awning - Grey Penetration Caulk	Gray Non-Fibrous Homogeneous		10% Quartz 10% Ca Carbonate 80% Non-fibrous (Other)	None Detected

Initial report from: 05/04/2017 08:00:17



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EMSL Order: 411703312

Customer ID: AXEM25

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Project ID:

Analyst(s)

Eric Loomis (24)

Lacy Searcy (33)

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: 05/04/2017 08:00:17



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**EMSL Order:** 411703312  
**Customer ID:** AXEM25  
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**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett Building #2

## 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
2-3 411703312-0042	Interior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-9 411703312-0043	Kitchen Counter - White Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-32 411703312-0044	Under Kitchen Sink - White Coating on Sink	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-35 411703312-0045	Exterior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-38 411703312-0046	Kitchen - White Mastic on Backsplash	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-47-Flooring 411703312-0047	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	Brown/White Fibrous Homogeneous	100	None	No Asbestos Detected
2-47-Mastic 411703312-0048	Upstairs Bathroom - Bathroom Stall Plastic w/ Mastic	Clear Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-50-Flooring 411703312-0049	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Fibrous Homogeneous	100	None	No Asbestos Detected
2-50-Mastic 411703312-0050	Upstairs Bathroom - Tan Large Square Pattern Vinyl Floor w/ Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-53-Cove Base 411703312-0051	Upstairs Bathroom - Cove Base Mastic	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-53-Mastic 411703312-0052	Upstairs Bathroom - Cove Base Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-59 411703312-0053	Bathroom Shower Stall - White Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/10/2017 11:51:02



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703312  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/24/2017  
**Project:** Cammie Clagett Building #2

## 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
2-62 411703312-0054	Exterior Brick Penetration by Awning - Grey Penetration Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Aaron Hartley (13)

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: 05/10/2017 11:51:02

EMSL Analytical, Inc.  
376 Crompton Street



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

7750

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolover@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 2		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different - If Bill to is Different note instructions in Comments** <i>Third Party Billing requires written authorization from third party</i>			
<b>Turnaround Time (TAT) Options* - Please Check</b>			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 48 Hour
<input type="checkbox"/> 72 Hour	<input type="checkbox"/> 96 Hour	<input checked="" type="checkbox"/> 1 Week	<input type="checkbox"/> 2 Week
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA		<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	
<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"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)		<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:</b> EPA 100.2 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 EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)	
<input checked="" type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name: Tom Oliver		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
2- 63	HVAC tape	PLM	
1- 64		↓	
1- 65		TEM	
Client Sample # (s): 63-73 & 77-88		Total # of Samples: 17/23	
Relinquished (Client):		Date: 12-4-17	Time:
Received (Lab):		Date: 12/6/17	Time: 9am
Comments/Special Instructions: @EFX 795379784183			



### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7750

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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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
2- 66	Plaster w/ finish over unfinished	PLM	
67	drywall ↓	↓	
68	Unfinished drywall under plaster w/ finish	PLM	
69	Large square rock pattern vinyl floor	PLM	
70	w/ mastic ↓	TEM	
71	Roof & awning shingles & felt	PLM	
72	(3) ↓ (1)	↓	
73		TEM	
74	Sample #'s not used	#	
75	↓		
76			
77	Awning & flashing caulk	PLM	
78	↓	↓	
79		TEM	
80	Roof gable vent caulk	PLM	
81	↓	↓	
82		TEM	
83	Paint coated metal - vent pipes	PLM	
84	↓	↓	
85			
86	Black & gray mastic on roof	PLM	
87	penetrations ↓	↓	
88		TEM	

\*Comments/Special Instructions:



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707750

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017 - 12/12/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 2

## 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
2-63 <i>021707750-0001</i>	HVAC Tape	Silver/Yellow/Beige Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
2-64 <i>021707750-0002</i>	HVAC Tape	Tan/Silver/Beige Fibrous Heterogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
2-66-Skim Coat <i>021707750-0004</i>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-66-Rough Coat <i>021707750-0004A</i>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
2-66-Drywall <i>021707750-0004B</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
2-67-Skim Coat <i>021707750-0005</i>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-67-Rough Coat <i>021707750-0005A</i>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
2-67-Drywall <i>021707750-0005B</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
2-68 <i>021707750-0006</i> <i>Only drywall present</i>	Unfinished Drywall Under Plaster w/ Finish	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
2-69-Flooring <i>021707750-0007</i>	Large Square Rock Pattern Vinyl Floor w/ Mastic	Tan/White Non-Fibrous Homogeneous	1% Glass	99% Non-fibrous (Other)	None Detected
2-69-Mastic <i>021707750-0007A</i>	Large Square Rock Pattern Vinyl Floor w/ Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-71-Shingle 1 <i>021707750-0009</i>	Roof and Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
2-71-Shingle 2 <i>021707750-0009A</i>	Roof and Awning Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
2-71-Shingle 3 <i>021707750-0009B</i>	Roof and Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
2-71-Felt <i>021707750-0009C</i>	Roof and Awning Shingles/Felt	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 11:06:15



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707750  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-72-Shingle 1 <small>021707750-0010</small>	Roof and Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
2-72-Shingle 2 <small>021707750-0010A</small>	Roof and Awning Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
2-72-Shingle 3 <small>021707750-0010B</small>	Roof and Awning Shingles/Felt	Brown/Black/Orange Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
2-72-Felt <small>021707750-0010C</small>	Roof and Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
2-77 <small>021707750-0012</small>	Awning/Flashing Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-78 <small>021707750-0013</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-80 <small>021707750-0015</small>	Roof Goble Vent Caulk	Beige/Rust Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-81 <small>021707750-0016</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
2-83 <small>021707750-0018</small>	Paint Coated Metal-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-84 <small>021707750-0019</small>	Paint Coated Metal-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-85 <small>021707750-0020</small>	Paint Coated Metal-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
2-86 <small>021707750-0021</small>	Block/Gray Mastic on Roof Penetrations	Gray/Black Fibrous Heterogeneous	3% Cellulose	94% Non-fibrous (Other)	3% Chrysotile
2-87 <small>021707750-0022</small>	Block/Gray Mastic on Roof Penetrations				Positive Stop (Not Analyzed)

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

Nicole Shutts (9)  
Scott Combs (18)

Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 12/12/2017 11:06:15



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707750  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/12/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 2

## 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
2-65 021707750-0003	HVAC Tape	Gray/Tan/Silver Fibrous Homogeneous	100	None	No Asbestos Detected
2-70- Vinyl Floor 021707750-0008	Large Square Rock Pattern Vinyl Floor w/ Mastic	Gray/Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-70-Mastic 021707750-0008A	Large Square Rock Pattern Vinyl Floor w/ Mastic	Tan/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-73-Shingle 1 021707750-0011	Roof and Awning Shingles/Felt	Brown/Various/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
2-73-Shingle 2 021707750-0011A	Roof and Awning Shingles/Felt	Brown/Various/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
2-73-Shingle 3 021707750-0011B	Roof and Awning Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	100	None	No Asbestos Detected
2-73-Felt 021707750-0011C	Roof and Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
2-79 021707750-0014	Awning/Flashing Caulk	Gray/Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-82 021707750-0017	Roof Goble Vent Caulk	Gray/Tan/White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
2-88 021707750-0023	Block/Gray Mastic on Roof Penetrations				

Positive Stop (Not Analyzed)

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 10:34:26



**EMSL Analytical, Inc.**

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707750  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/12/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 2

**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
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Analyst(s)  

---

Stephen Bennett (9)

---

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 10:34:26



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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703309

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 7 Winchester Court		Third Party Billing requires written authorization from third party	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: <i>Commie Clayett Building 3</i>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options\* - Please Check

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Date Sampled: 4-25-17

Samplers Name: *Nicholas Neerhof*      Samplers Signature: *[Signature]*

Sample #	HA #	Sample Location	Material Description
3-1		exterior metal window casings	Black casing caulk
3-2			
3-3			
3-4		interior metal window casings	Black caulk
3-5			
3-6			
3-7		exterior wooden door frames	Door caulk
3-8			
3-9			
3-10		Kitchen <del>to</del> Sink	Black coating on Sink

Client Sample # (s): 3-1 - 3-64      Total # of Samples: 58

Relinquished (Client): *Nicholas Neerhof*      Date: 4-26-17      Time:

Received (Lab): *Kyle Nbo*      Date: 4/27/17      Time: 10:00 AM Fk

Comments/Special Instructions:  
Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order: 7952 7822 3693



EMSL ANALYTICAL, INC.  
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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703309

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
3-11		Kitchen Sink	Black coating on sink
3-12			
3-13		Kitchen counter	white caulk
3-14			
3-15			
3-16		Exterior brick penetration by <sup>swinging</sup> <del>cutting</del>	Brown caulk
3-17			
3-18			
<del>3-19</del>		U-350 Throughout	Drywall with joint compound and tape
3-20		U-352	
3-21		U-354	
3-22		U-356	
3-23		U-358	
3-24		U-360	
3-25		U-360	
3-26		throughout downstairs flooring	Top-tan speckled 12"x12" floor tile with mastic
3-27			Second-cream 12"x12" floor tile with mastic
<del>3-28</del>			
3-29		throughout upstairs flooring	Top-tan speckled 12"x12" floor tile with mastic
3-30			Second-brown 12"x12" floor tile with mastic
3-31			
3-32		upstairs bedroom	Drywall patch joint compound
3-33			
3-34			

**\*Comments/Special Instructions:**

Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



EMSL ANALYTICAL, INC.  
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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703309

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
3-35		upstairs bathroom shower stall and sink	white caulk
3-36			
3-37			
3-38		upstairs bathroom flooring	brown mastic under ceramic tile
3-39		U-350	with grey leveling compound beneath
3-40			
3-44		HVAC system downstairs	HVAC mastic - white
3-45			
3-46			
3-47		upstairs bathroom flooring	Square stone pattern Vinyl
3-48		U-352	
3-49			
3-53		underneath kitchen sink	white coating on sink
3-54			
3-55			
3-56		exterior brick <del>penetration</del> <sup>penetration</sup> by awning	Grey mastic
3-57			
3-58			
3-59		Bathroom floor U-360	Stone pattern vinyl floor with mastic
3-60			
3-61			
3-62		Bathroom wet wall	plaster with finish
3-63			
3-64			

**\*Comments/Special Instructions:**  
Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

<b>EMSL Order:</b> 411703309
<b>Customer ID:</b> AXEM25
<b>Customer PO:</b>
<b>Project ID:</b>

<b>Attention:</b> Nicholas Neerhof Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	<b>Phone:</b> (864) 640-5274 <b>Fax:</b> <b>Received Date:</b> 04/27/2017 10:00 AM <b>Analysis Date:</b> 05/02/2017 - 05/03/2017 <b>Collected Date:</b> 04/25/2017
<b>Project:</b> Cammie Clagett Building #3	

## 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
3-1 <i>411703309-0001</i>	Exterior Metal Window Casings - Black Casing Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-2 <i>411703309-0002</i>	Exterior Metal Window Casings - Black Casing Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-4 <i>411703309-0003</i>	Interior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-5 <i>411703309-0004</i>	Interior Metal Window Casings - Black Caulk	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-7 <i>411703309-0005</i>	Exterior Wooden Door Frames - Door Caulk	Gray Non-Fibrous Homogeneous		5% Quartz 93% Non-fibrous (Other)	2% Chrysotile
3-8 <i>411703309-0006</i>	Exterior Wooden Door Frames - Door Caulk				Positive Stop (Not Analyzed)
3-10 <i>411703309-0007</i>	Kitchen Sink - Black Coating on Sink	Black Non-Fibrous Homogeneous		20% Ca Carbonate 76% Non-fibrous (Other)	4% Chrysotile
3-11 <i>411703309-0008</i>	Kitchen Sink - Black Coating on Sink				Positive Stop (Not Analyzed)
3-13 <i>411703309-0009</i>	Kitchen Counter - White Caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-14 <i>411703309-0010</i>	Kitchen Counter - White Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
3-16 <i>411703309-0011</i>	Exterior Brick Penetration by Awning - Brown Caulk	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-17 <i>411703309-0012</i>	Exterior Brick Penetration by Awning - Brown Caulk	Brown Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-19-Drywall <i>411703309-0013</i> <i>No tape present</i>	U-350 Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-19-Joint Compound <i>411703309-0013A</i>	U-350 Throughout - Drywall with Joint Compound and Tape	Beige Non-Fibrous Homogeneous		5% Ca Carbonate 93% Non-fibrous (Other)	2% Chrysotile
3-20-Drywall <i>411703309-0014</i>	U-352 Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-20-Joint Compound <i>411703309-0014A</i>	U-352 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)

Initial report from: 05/03/2017 13:38:32



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**EMSL Order:** 411703309  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-20-Tape <i>411703309-0014B</i>	U-352 Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	100% Cellulose		None Detected
3-21-Drywall <i>411703309-0015</i> <i>No tape present</i>	U-354 Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-21-Joint Compound <i>411703309-0015A</i>	U-354 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
3-22-Drywall <i>411703309-0016</i>	U-356 Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-22-Joint Compound <i>411703309-0016A</i>	U-356 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
3-22-Tape <i>411703309-0016B</i>	U-356 Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	100% Cellulose		None Detected
3-23-Drywall <i>411703309-0017</i> <i>No tape present</i>	U-358 Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-23-Joint Compound <i>411703309-0017A</i>	U-358 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
3-24-Drywall <i>411703309-0018</i> <i>No tape present</i>	U-360 Throughout - Drywall with Joint Compound and Tape	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
3-24-Joint Compound <i>411703309-0018A</i>	U-360 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
3-25-Drywall <i>411703309-0019</i> <i>No tape present</i>	U-360 Throughout - Drywall with Joint Compound and Tape	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
3-25-Joint Compound <i>411703309-0019A</i>	U-360 Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
3-26-Top Floor Tile <i>411703309-0020</i>	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Tan/White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
3-26-Mastic <i>411703309-0020A</i>	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 13:38:32



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**EMSL Order:** 411703309  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-26-Bottom Floor Tile  411703309-0020B	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Beige Non-Fibrous Homogeneous	4% Fibrous (Other)	8% Ca Carbonate 86% Non-fibrous (Other)	2% Chrysotile
3-26-Mastic  411703309-0020C	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Black Non-Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
3-27-Top Floor Tile  411703309-0021	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
3-27-Mastic  411703309-0021A	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-27-Bottom Floor Tile  411703309-0021B	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
3-27-Mastic  411703309-0021C	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
3-29-Top Floor Tile  411703309-0022	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Tan/White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
3-29-Mastic  411703309-0022A	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Gray/Tan Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected

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## 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
3-29-Bottom Floor Tile  411703309-0022B	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Beige Non-Fibrous Homogeneous	4% Fibrous (Other)	8% Ca Carbonate 86% Non-fibrous (Other)	2% Chrysotile
3-29-Mastic  411703309-0022C	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Black Non-Fibrous Homogeneous	3% Cellulose	93% Non-fibrous (Other)	4% Chrysotile
3-30-Top Floor Tile  411703309-0023	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
3-30-Mastic  411703309-0023A	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Tan Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-30-Bottom Floor Tile  411703309-0023B	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
3-30-Mastic  411703309-0023C	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic				Positive Stop (Not Analyzed)
3-32  411703309-0024	Upstairs Bedroom - Drywall Patch Joint Compound	White Non-Fibrous Homogeneous		60% Ca Carbonate 40% Non-fibrous (Other)	None Detected
3-33  411703309-0025	Upstairs Bedroom - Drywall Patch Joint Compound	White Non-Fibrous Homogeneous		60% Ca Carbonate 40% Non-fibrous (Other)	None Detected
3-34  411703309-0026	Upstairs Bedroom - Drywall Patch Joint Compound	White Non-Fibrous Homogeneous		45% Ca Carbonate 55% Non-fibrous (Other)	None Detected
3-35  411703309-0027	Upstairs Bathroom Shower Stall and Sink - White Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-36  411703309-0028	Upstairs Bathroom Shower Stall and Sink - White Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

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**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-38-Ceramic Tile 411703309-0029	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	White Non-Fibrous Homogeneous		5% Quartz 95% Non-fibrous (Other)	None Detected
3-38-Mastic 411703309-0029A	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Brown/Tan Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
3-38-Leveler 411703309-0029B	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Gray Fibrous Homogeneous	10% Cellulose	10% Quartz 80% Non-fibrous (Other)	None Detected
3-39-Ceramic Tile 411703309-0030	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	White Non-Fibrous Homogeneous		5% Quartz 95% Non-fibrous (Other)	None Detected
3-39-Mastic 411703309-0030A	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Brown/Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
3-39-Leveler 411703309-0030B	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Gray Non-Fibrous Homogeneous	5% Cellulose	10% Ca Carbonate 85% Non-fibrous (Other)	None Detected
3-40-Ceramic Tile 411703309-0030C	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-40-Leveler 411703309-0030D	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Gray Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
3-44 411703309-0031	HVAC System Downstairs - HVAC Mastic - White	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-45 411703309-0032	HVAC System Downstairs - HVAC Mastic - White	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
3-47 411703309-0033	Upstairs Bathroom Flooring - U-352 - Square Stone Pattern Vinyl	Gray Fibrous Homogeneous	4% Glass	96% Non-fibrous (Other)	None Detected

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**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-48 <small>411703309-0034</small>	Upstairs Bathroom Flooring - U-352 - Square Stone Pattern Vinyl	Tan Fibrous Homogeneous	3% Glass	5% Ca Carbonate 92% Non-fibrous (Other)	None Detected
3-53 <small>411703309-0035</small>	nderneath Kitchen Sink - White Coating on Sink	White Non-Fibrous Homogeneous	15% Cellulose	8% Ca Carbonate 5% Mica 72% Non-fibrous (Other)	None Detected
3-54 <small>411703309-0036</small>	nderneath Kitchen Sink - White Coating on Sink	Tan Fibrous Homogeneous	10% Cellulose	8% Ca Carbonate 5% Mica 77% Non-fibrous (Other)	None Detected
3-56 <small>411703309-0037</small>	Exterior Brick Penetration by Awning - Grey Mastic	Gray Fibrous Homogeneous	10% Glass	25% Quartz 65% Non-fibrous (Other)	None Detected
3-57 <small>411703309-0038</small>	Exterior Brick Penetration by Awning - Grey Mastic	Gray Fibrous Homogeneous	8% Glass	30% Quartz 62% Non-fibrous (Other)	None Detected
3-59-Flooring <small>411703309-0039</small>	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Beige Fibrous Homogeneous	15% Cellulose 2% Glass	10% Ca Carbonate 73% Non-fibrous (Other)	None Detected
3-59-Mastic <small>411703309-0039A</small>	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Tan Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
3-60-Flooring <small>411703309-0040</small>	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Beige Fibrous Homogeneous	15% Cellulose 3% Glass	82% Non-fibrous (Other)	None Detected
3-60-Mastic <small>411703309-0040A</small>	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Tan Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
3-62-Skim Coat <small>411703309-0041</small>	Bathroom Wet Wall - Plaster with Finish	White Non-Fibrous Homogeneous		5% Quartz 5% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-62-Rough Coat <small>411703309-0041A</small>	Bathroom Wet Wall - Plaster with Finish	Gray Non-Fibrous Homogeneous	2% Cellulose <1% Glass	35% Quartz 63% Non-fibrous (Other)	None Detected
3-63-Skim Coat <small>411703309-0042</small>	Bathroom Wet Wall - Plaster with Finish	White Non-Fibrous Homogeneous		5% Quartz 95% Non-fibrous (Other)	None Detected
3-63-Rough Coat <small>411703309-0042A</small>	Bathroom Wet Wall - Plaster with Finish	Gray Non-Fibrous Homogeneous	1% Cellulose 1% Glass	35% Quartz 63% Non-fibrous (Other)	None Detected
3-64-Skim Coat <small>411703309-0043</small>	Bathroom Wet Wall - Plaster with Finish	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
3-64-Rough Coat <small>411703309-0043A</small>	Bathroom Wet Wall - Plaster with Finish	Gray Non-Fibrous Homogeneous		30% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 13:38:32



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EMSL Order: 411703309

Customer ID: AXEM25

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Analyst(s)

*Aaron Hartley (38)*

*Anupriya Tyagi (19)*

*Travis Hartney (6)*

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: 05/03/2017 13:38:32



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**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/09/2017  
**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building #3

## 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
3-3 411703309-0044	Exterior Metal Window Casings - Black Casing Caulk	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-6 411703309-0045	Interior Metal Window Casings - Black Caulk	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-15 411703309-0046	Kitchen Counter - White Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-18 411703309-0047	Exterior Brick Penetration by Awning - Brown Caulk	Brown Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-28-Top Floor Tile 411703309-0048	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-28-Mastic 411703309-0049	Throughout Downstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Cream 12"x12" Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous	99.3	0.71 Fibrous_Other	No Asbestos Detected
3-31-Top Floor Tile 411703309-0050	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-31-Mastic 411703309-0051	Throughout Upstairs Flooring - Top - Tan Speckled 12"x12" Floor Tile with Mastic/ Second - Brown 12"x12" Floor Tile with Mastic	Yellow Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-37 411703309-0052	Upstairs Bathroom Shower Stall and Sink - White Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/09/2017 12:35:43



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Tel/Fax: (704) 525-2205 / (704) 525-2382  
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**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building #3

## 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
3-40-Mastic 411703309-0053	Upstairs Bathroom Flooring - U-350 - Brown Mastic under Ceramic Tile with Grey Leveling Compound Beneath	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-46 411703309-0054	HVAC System Downstairs - HVAC Mastic - White	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-49 411703309-0055	Upstairs Bathroom Flooring - U-352 - Square Stone Pattern Vinyl	Brown/Beige Fibrous Homogeneous	100	None	No Asbestos Detected
3-55 411703309-0056	Underneath Kitchen Sink - White Coating on Sink	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-58 411703309-0057	Exterior Brick Penetration by Awning - Grey Mastic	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-61-Flooring 411703309-0058	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Tan Fibrous Homogeneous	100	None	No Asbestos Detected
3-61-Mastic 411703309-0059	Bathroom Floor - U-360 - Stone Pattern Vinyl Floor with Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Aaron Hartley (16)

Lee Plumley, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/09/2017 12:35:43



### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7765

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): <u>Tom Oliver</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: <u>toliver@apex-ehs.com</u>		Purchase Order:	
Project Name/Number: <u>Cammie Clagett Bldg 3</u>		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: <u>SC</u>		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

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

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Oliver

Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
3- 65	HVAC tape w/ mastic	PLM	
66			
67		TEM	

Client Sample # (s): <u>65-70 + 74-88</u>	Total # of Samples: <u>21</u>
Relinquished (Client): <u>[Signature]</u>	Date: <u>12-4-17</u> Time: <u> </u>
Received (Lab): <u>[Signature]</u>	Date: <u>12/6/17</u> Time: <u>9AM</u>
Comments/Special Instructions: <u>@EFX 795379784183</u>	



EMSL ANALYTICAL, INC.  
EN LABORATORY PRODUCTS TRAINING  
LAB

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7765

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
3- 68	Roof + awning shingles (3) +	PLM	
69	felt (1) ↓	I	
70		TEM	
71	Sample #'s not used		
72	↓		
73			
74	Awning + flashing caulk	PLM	
75	↓	I	
76		TEM	
77	Roof gable vent caulk	PLM	
78	↓	I	
79		TEM	
80	Painted metal pipe - vent pipes	PLM	
81	↓	I	
82			
83	Black + gray mastic on roof	PLM	
84	penetrations ↓	I	
85		TEM	
86	Plaster w/ finish over unfinished	PLM	
87	drywall ↓	I	
88	Unfinished <del>drywall</del> under plaster w/ finish	PLM	
*Comments/Special Instructions:			



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707765

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017 - 12/12/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 3

## 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
3-65-Tape <small>021707765-0001</small>	HVAC Tape w/ Mastic	Tan/Silver/Beige Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
3-65-Mastic <small>021707765-0001A</small>	HVAC Tape w/ Mastic	Yellow Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
3-66-Tape <small>021707765-0002</small>	HVAC Tape w/ Mastic	Tan/Silver/Beige Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
3-66-Mastic <small>021707765-0002A</small>	HVAC Tape w/ Mastic	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
3-68-Shingle 1 <small>021707765-0004</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
3-68-Shingle 2 <small>021707765-0004A</small>	Roof/Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
3-68-Shingle 3 <small>021707765-0004B</small>	Roof/Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
3-68-Felt <small>021707765-0004C</small>	Roof/Awning Shingles/Felt	Brown/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
3-69-Shingle 1 <small>021707765-0005</small>	Roof/Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
3-69-Shingle 2 <small>021707765-0005A</small>	Roof/Awning Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
3-69-Shingle 3 <small>021707765-0005B</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
3-69-Felt <small>021707765-0005C</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
3-74 <small>021707765-0007</small>	Awning/Flashing Caulk	Tan/White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-75 <small>021707765-0008</small>	Awning/Flashing Caulk	Tan/White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-77 <small>021707765-0010</small>	Roof Goble Vent Caulk	Beige/Rust/Orange Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 11:03:24



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707765  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-78 <i>021707765-0011</i>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-80 <i>021707765-0013</i>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-81 <i>021707765-0014</i>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-82 <i>021707765-0015</i>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
3-83 <i>021707765-0016</i>	Black/Gray Mastic on Roof Penetrations	Brown/Gray/Black Fibrous Heterogeneous	3% Cellulose	94% Non-fibrous (Other)	3% Chrysotile
3-84 <i>021707765-0017</i>	Black/Gray Mastic on Roof Penetrations				Positive Stop (Not Analyzed)
3-86-Skim Coat <i>021707765-0019</i>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-86-Rough Coat <i>021707765-0019A</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
3-86-Drywall <i>021707765-0019B</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-87-Skim Coat <i>021707765-0020</i>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
3-87-Rough Coat <i>021707765-0020A</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 70% Non-fibrous (Other)	None Detected
3-87-Drywall <i>021707765-0020B</i>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
3-88 <i>021707765-0021</i> <i>Only drywall present</i>	Unfinished Drywall Under Plaster Finish	Brown/Gray Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected

Analyst(s)

Nicole Shutts (10)

Scott Combs (17)

Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 12/12/2017 11:03:24



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707765  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/12/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 3

## 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
3-67-Tape 021707765-0003	HVAC Tape w/ Mastic	Silver Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-67-Mastic 021707765-0003A	HVAC Tape w/ Mastic	Tan Fibrous Heterogeneous	100	None	No Asbestos Detected
3-70-Shingle 1 021707765-0006	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
3-70-Shingle 2 021707765-0006A	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
3-70-Shingle 3 021707765-0006B	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
3-70- Felt 021707765-0006C	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
3-76 021707765-0009	Awning/Flashing Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-79 021707765-0012	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
3-85 021707765-0018	Black/Gray Mastic on Roof Penetrations				

Positive Stop (Not Analyzed)

Analyst(s)

Stephen Bennett (8)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 08:30:05



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703310

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company : Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: 7 Winchester Court		Third Party Billing requires written authorization from third party	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com		Fax #:	Purchase Order:
Project Name/Number: Cammie Cluggett building 4		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

Turnaround Time (TAT) Options\* - Please Check

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group Date Sampled: 4-25-17

Samplers Name: ~~XXXX~~ Nicholas Neerhof Samplers Signature: *[Signature]*

Sample #	HA #	Sample Location	Material Description
4-1		Throughout	Dry wall with Joint compound and tape
4-2			
4-3			
4-4			
<del>4-5</del>			
4-6			
4-7			
4-8		Bathroom wall	plaster with finish over unfinished dry wall
4-9			
4-10			

Client Sample # (s): 4-1 - 4-38 Total # of Samples: 35

Relinquished (Client): Nicholas Neerhof Date: 4-26-17 Time:

Received (Lab): *[Signature]* Date: 4/27/17 Time: 10:00am Fx

Comments/Special Instructions: Please utilize positive stop analysis. 7952 7822 3708

Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

**Asbestos Bulk Building Material  
Chain of Custody**

EMSL Order Number (Lab Use Only):

411703310

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
4-11		Bathroom wall	Plaster with finish over unfinished dry wall
<del>4-12</del>			
4-15		Bathroom floor U-351	Grey large square pattern vinyl floor with mastic
4-16			
4-17			
4-18		under kitchen sink	white coating on sink
4-19			
4-20			
4-21		Kitchen counter	kitchen counter caulk
4-22			
4-23			
4-24		Bathroom shower stall and sink	shower stall and sink caulk
4-25			
4-26			
4-27		HVAC closet	white HVAC caulk
4-28			
4-29			
4-30		Front bedroom	interior window caulk
4-31			
4-32			
4-33		Kitchen - under sink	Black <del>cat</del> coating on sink
4-34			
4-35			

**\*Comments/Special Instructions:**  
Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:





# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

EMSL Order: 411703310

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/27/2017 10:00 AM

**Analysis Date:** 05/02/2017

**Collected Date:** 04/25/2017

**Project:** Cammie Clagett Building #4

## 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
4-1-Drywall <i>411703310-0001</i> <i>No tape present.</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-1-Joint Compound <i>411703310-0001A</i>	Throughout - Drywall with Joint Compound and Tape	Beige Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
4-2-Drywall <i>411703310-0002</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
4-2-Joint Compound <i>411703310-0002A</i>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
4-2-Tape <i>411703310-0002B</i>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4-3-Drywall <i>411703310-0003</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
4-3-Joint Compound <i>411703310-0003A</i>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
4-3-Tape <i>411703310-0003B</i>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4-4-Drywall <i>411703310-0004</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-4-Joint Compound <i>411703310-0004A</i>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
4-4-Tape <i>411703310-0004B</i>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4-5-Drywall <i>411703310-0005</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-5-Joint Compound <i>411703310-0005A</i>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
4-5-Tape <i>411703310-0005B</i>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4-6-Drywall <i>411703310-0006</i>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
4-6-Joint Compound <i>411703310-0006A</i>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)

Initial report from: 05/03/2017 14:39:09



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703310  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-6-Tape <small>411703310-0006B</small>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
4-7-Drywall <small>411703310-0007</small>	Throughout - Drywall with Joint Compound and Tape	Brown/White Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
4-7-Joint Compound <small>411703310-0007A</small>	Throughout - Drywall with Joint Compound and Tape				Positive Stop (Not Analyzed)
4-7-Tape <small>411703310-0007B</small>	Throughout - Drywall with Joint Compound and Tape	Tan Fibrous Homogeneous	100% Glass		None Detected
4-8-Drywall <small>411703310-0008</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-8-Skim Coat <small>411703310-0008A</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
4-8-Rough Coat <small>411703310-0008B</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 8% Ca Carbonate 62% Non-fibrous (Other)	None Detected
4-9-Drywall <small>411703310-0009</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-9-Skim Coat <small>411703310-0009A</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-9-Rough Coat <small>411703310-0009B</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
4-10-Skim Coat <small>411703310-0010</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-10-Rough Coat <small>411703310-0010A</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 8% Ca Carbonate 62% Non-fibrous (Other)	None Detected
4-11-Drywall <small>411703310-0011</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
4-11-Skim Coat <small>411703310-0011A</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
4-11-Rough Coat <small>411703310-0011B</small>	Bathroom Wall - Plaster with Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		25% Quartz 5% Ca Carbonate 70% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 14:39:09



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**EMSL Order:** 411703310  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-15-Flooring <small>411703310-0012</small>	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Gray Fibrous Homogeneous	20% Cellulose 2% Glass	78% Non-fibrous (Other)	None Detected
4-15-Mastic <small>411703310-0012A</small>	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Tan Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
4-16-Floor Tile <small>411703310-0013</small>	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Gray Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
4-16-Mastic <small>411703310-0013A</small>	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Tan Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
4-18 <small>411703310-0014</small>	Under Kitchen Sink - White Coating on Sink	Tan Fibrous Homogeneous	15% Cellulose	8% Ca Carbonate 5% Mica 72% Non-fibrous (Other)	None Detected
4-19 <small>411703310-0015</small>	Under Kitchen Sink - White Coating on Sink	Tan Fibrous Homogeneous	30% Cellulose	5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
4-21 <small>411703310-0016</small>	Kitchen Counter - Kitchen Counter Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
4-22 <small>411703310-0017</small>	Kitchen Counter - Kitchen Counter Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-24 <small>411703310-0018</small>	Bathroom Shower Stall and Sink - Shower Stall and Sink Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-25 <small>411703310-0019</small>	Bathroom Shower Stall and Sink - Shower Stall and Sink Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-27 <small>411703310-0020</small>	HVAC Closet - White HVAC Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-28 <small>411703310-0021</small>	HVAC Closet - White HVAC Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-30 <small>411703310-0022</small>	Front Bedroom - Interior Window Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
4-31 <small>411703310-0023</small>	Front Bedroom - Interior Window Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-33 <small>411703310-0024</small>	Kitchen - Under Sink - Black Coating on Sink	Black Fibrous Homogeneous		8% Ca Carbonate 90% Non-fibrous (Other)	2% Chrysotile
4-34 <small>411703310-0025</small>	Kitchen - Under Sink - Black Coating on Sink				Positive Stop (Not Analyzed)
4-36 <small>411703310-0026</small>	Kitchen - Backsplash (Underneath) - Mastic under Stove Backsplash	White/Clear Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 14:39:09



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703310  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-37	Kitchen - Backsplash (Underneath) - Mastic	White Non-Fibrous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
411703310-0027	under Stove Backsplash	Homogeneous			

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

Anupriya Tyagi (27)

Lacy Searcy (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: 05/03/2017 14:39:09



# EMSL Analytical, Inc.

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

**EMSL Order:** 411703310  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/09/2017  
**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building #4

## 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
4-17-Floor Tile 411703310-0028	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Brown/Gray Fibrous Heterogeneous	100	None	No Asbestos Detected
4-17-Mastic 411703310-0029	Bathroom Floor - U-351 - Grey Large Square Pattern Vinyl Floor with Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-20 411703310-0030	Under Kitchen Sink - White Coating on Sink	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-23 411703310-0031	Kitchen Counter - Kitchen Counter Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-26 411703310-0032	Bathroom Shower Stall and Sink - Shower Stall and Sink Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-29 411703310-0033	HVAC Closet - White HVAC Caulk	Beige Non-Fibrous Homogeneous	99.9	0.11 Fibrous_Other	No Asbestos Detected
4-32 411703310-0034	Front Bedroom - Interior Window Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-38 411703310-0035	Kitchen - Backsplash (Underneath) - Mastic under Stove Backsplash	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Aaron Hartley (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: 05/09/2017 12:36:33



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7751

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: toliiver@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 4		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

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

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Oliver      Samplers Signature: *[Signature]*

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
4- 51	HVAC tape	PLM	
52	↓	↓	
53	↓	TEM	

Client Sample # (s): 51-56 + 60-71	Total # of Samples: 18
Relinquished (Client): <i>[Signature]</i>	Date: 12-4-17      Time:
Received (Lab): <i>[Signature]</i>	Date: 12/6/17      Time: 9AM
Comments/Special Instructions: @EMX 795379784183	



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**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

7751

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
4-54	Roof & awning shingles (3) &	PLM	
55	felt (1)	↓	
56	↓	TEM	
57	Sample #'s not used		
58	↓		
59	↓		
60	Awning & flashing caulk	PLM	
61	↓	↓	
62	↓	TEM	
63	Roof gable vent caulk	PLM	
64	↓	↓	
65	↓	TEM	
66	Painted metal pipe-vent pipes	PLM	
67	↓	↓	
68	↓	TEM	
69	Black & gray mastic on roof	PLM	
70	penetrations	↓	
71	↓	TEM	
*Comments/Special Instructions:			



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707751

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg 4

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

Sample	Description	Appearance	Non-Asbestos		Asbestos % Type
			% Fibrous	% Non-Fibrous	
4-51-Tape <small>021707751-0001</small>	HVAC Tape	Gray/Silver Fibrous Homogeneous	20% Cellulose 15% Synthetic	65% Non-fibrous (Other)	None Detected
4-51-Mastic <small>021707751-0001A</small>	HVAC Tape	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
4-52-Tape <small>021707751-0002</small>	HVAC Tape	Tan/Silver Fibrous Homogeneous	40% Cellulose 15% Synthetic	45% Non-fibrous (Other)	None Detected
4-52-Mastic <small>021707751-0002A</small>	HVAC Tape	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
4-54-Shingle 1 <small>021707751-0004</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
4-54-Shingle 2 <small>021707751-0004A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
4-54-Shingle 3 <small>021707751-0004B</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
4-54-Felt <small>021707751-0004C</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
4-55-Shingle 1 <small>021707751-0005</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
4-55-Shingle 2 <small>021707751-0005A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
4-55-Shingle 3 <small>021707751-0005B</small>	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
4-55-Felt <small>021707751-0005C</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
4-60 <small>021707751-0007</small>	Awning/Flashing Caulk	Gray/Tan/White Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
4-61 <small>021707751-0008</small>	Awning/Flashing Caulk	Gray/Tan/White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
4-63 <small>021707751-0010</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-64 <small>021707751-0011</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

Initial report from: 12/11/2017 14:52:34



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707751  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
4-66 <i>021707751-0013</i>	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-67 <i>021707751-0014</i>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
4-69 <i>021707751-0016</i>	Black/Gray Mastic on Roof Penetrations	Gray/Black Fibrous Homogeneous		96% Non-fibrous (Other)	4% Chrysotile
4-70 <i>021707751-0017</i>	Black/Gray Mastic on Roof Penetrations				Positive Stop (Not Analyzed)

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

Kristie Elliott (10)

Nicole Shutts (9)

Stephen Bennett, Laboratory Manager  
or Other Approved Signatory

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

Initial report from: 12/11/2017 14:52:34



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707751  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/12/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg 4

## 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
4-53-Tape 021707751-0003	HVAC Tape	Silver Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-53-Mastic 021707751-0003A	HVAC Tape	Tan Fibrous Heterogeneous	100	None	No Asbestos Detected
4-56-Shingle 1 021707751-0006	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
4-56-Shingle 2 021707751-0006A	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
4-56-Shingle 3 021707751-0006B	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
4-56-Felt 021707751-0006C	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
4-62 021707751-0009	Awning/Flashing Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
4-65 021707751-0012	Roof Goble Vent Caulk	White/Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
4-68 021707751-0015	Painted Metal Pipe- Vent Pipes	Gray Non-Fibrous Homogeneous	100	None	<1.0% Chrysotile
4-71 021707751-0018	Black/Gray Mastic on Roof Penetrations				
Positive Stop (Not Analyzed)					

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 10:13:52



# EMSL Analytical, Inc.

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Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707751  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Project:** Cammie Clagett Bldg 4

**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017 - 12/12/2017  
**Collected Date:** 12/04/2017

## 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
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Analyst(s)  

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Stephen Bennett (9)

---

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 10:13:52



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703311

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company: Apex Environmental Management		EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments**</small>	
Street: 7 Winchester Court		<i>Third Party Billing requires written authorization from third party</i>	
City: Mauldin	State/Province: SC	Zip/Postal Code: 29662	Country: US
Report To (Name): Nicholas Neerhof		Telephone #: 864-404-3210	
Email Address: nneerhof@apex-ehs.com #5		Fax #:	Purchase Order:
Project Name/Number: <i>Cammie Clagett Build-</i>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

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

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Date Sampled: *4-25-17*

Samplers Name: *Red Shultz*      Samplers Signature: *Josh K...*

Sample #	HA #	Sample Location	Material Description
5-1			<i>Drywall &amp; joint compound</i>
5-2			<div style="border-left: 1px solid black; border-right: 1px solid black; border-bottom: 1px solid black; height: 100px; width: 100%;"></div>
5-3			
5-4			
5-5			
5-6			
5-7			
<del>5-8</del>			

Client Sample # (s): <i>1-29</i>	Total # of Samples:
Relinquished (Client): <i>Josh K...</i> Date: <i>4-25-17</i> Time: <i>10:00am</i>	
Received (Lab): <i>Rebecca Nelson</i> Date: <i>4/27/17</i> Time: <i>10:00am FTX</i>	
Comments/Special Instructions: <small>Please utilize positive stop analysis.</small>	<i>7952 7822 3693</i>
<small>BillTo: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:</small>	



EMSL ANALYTICAL, INC.  
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### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703311

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
5-8			Plaster w/ finish over
5-9			unfinished dry wall
5-10		(no drywall)	┆
5-11			
5-12			12x12 tan speckled F.T.
5-13			w/mastic over 12x12 Brown
5-14			streaked F.T. w/ mastic
5-15			white HVAC mastic
5-16			┆
5-17			
5-18			kitchen counter caulk
5-19			┆
5-20			
5-21			Bathroom shower stall
5-22			caulk
5-23			┆
5-24			
5-25			Black coating under
5-26			kitchen sink
5-27			┆
5-28			
5-29			Interior window caulk
			┆

**\*Comments/Special Instructions:**  
 Please utilize positive stop analysis.  
 Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
 Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:



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

EMSL Order: 411703311

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/27/2017 10:00 AM

**Analysis Date:** 05/02/2017 - 05/03/2017

**Collected Date:** 04/25/2017

**Project:** Cammie Clagett Building #5

## 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
5-1-Drywall <small>411703311-0001</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-1-Beige Joint Compound <small>411703311-0001A</small>	Drywall & Joint Compound	Beige Fibrous Homogeneous		30% Ca Carbonate 67% Non-fibrous (Other)	3% Chrysotile
5-1-Tape <small>411703311-0001B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
5-2-Drywall <small>411703311-0002</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-2-Beige Joint Compound <small>411703311-0002A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
5-3-Drywall <small>411703311-0003</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-3-Beige Joint Compound <small>411703311-0003A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
5-4-Drywall <small>411703311-0004</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
5-4-Beige Joint Compound <small>411703311-0004A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
5-4-White Joint Compound <small>411703311-0004B</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
5-4-Tape <small>411703311-0004C</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
5-5-Drywall <small>411703311-0005</small>	Drywall & Joint Compound	Brown/White Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
5-5-White Joint Compound <small>411703311-0005A</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
5-5-Tape <small>411703311-0005B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	60% Glass	40% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 11:01:45



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376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703311  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-6-Drywall <small>411703311-0006</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
5-6-Beige Joint Compound <small>411703311-0006A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
5-6-Tape <small>411703311-0006B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
5-7-Drywall <small>411703311-0007</small>	Drywall & Joint Compound	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
5-7-Beige Joint Compound <small>411703311-0007A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
5-7-White Joint Compound <small>411703311-0007B</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 58% Non-fibrous (Other)	2% Chrysotile
5-8-Drywall <small>411703311-0008</small>	Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
5-8-Skim Coat <small>411703311-0008A</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-8-Rough Coat <small>411703311-0008B</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		35% Quartz 8% Ca Carbonate 57% Non-fibrous (Other)	None Detected
5-9-Drywall <small>411703311-0009</small>	Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-9-Skim Coat <small>411703311-0009A</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-9-Rough Coat <small>411703311-0009B</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 8% Ca Carbonate 62% Non-fibrous (Other)	None Detected
5-10-Skim Coat <small>411703311-0010</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
5-10-Rough Coat <small>411703311-0010A</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		30% Quartz 8% Ca Carbonate 62% Non-fibrous (Other)	None Detected
5-11-Drywall <small>411703311-0011</small>	Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
5-11-Skim Coat <small>411703311-0011A</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
5-11-Rough Coat <small>411703311-0011B</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		25% Quartz 8% Ca Carbonate 67% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 11:01:45



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**EMSL Order:** 411703311  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-12-Tan Floor Tile <small>411703311-0012</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
5-12-Mastic <small>411703311-0012A</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
5-12-Brown Floor Tile <small>411703311-0012B</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Brown Fibrous Homogeneous		30% Ca Carbonate 66% Non-fibrous (Other)	4% Chrysotile
5-12-Mastic <small>411703311-0012C</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Black Non-Fibrous Homogeneous	2% Cellulose	94% Non-fibrous (Other)	4% Chrysotile
5-13-Tan Floor Tile <small>411703311-0013</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
5-13-Mastic <small>411703311-0013A</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	5% Ca Carbonate 93% Non-fibrous (Other)	None Detected
5-13-Brown Floor Tile <small>411703311-0013B</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic				Positive Stop (Not Analyzed)
5-13-Mastic <small>411703311-0013C</small>	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic				Positive Stop (Not Analyzed)
5-15 <small>411703311-0014</small>	White HVAC Mastic	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-16 <small>411703311-0015</small>	White HVAC Mastic	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-18 <small>411703311-0016</small>	Kitchen Counter Caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
5-19 <small>411703311-0017</small>	Kitchen Counter Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
5-21 <small>411703311-0018</small>	Bathroom Shower Stall Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
5-22 <small>411703311-0019</small>	Bathroom Shower Stall Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected

Initial report from: 05/03/2017 11:01:45



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**EMSL Order:** 411703311  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-24 <small>411703311-0020</small>	Black Coating under Kitchen Sink	Black Fibrous Homogeneous		8% Ca Carbonate 89% Non-fibrous (Other)	3% Chrysotile
5-25 <small>411703311-0021</small>	Black Coating under Kitchen Sink				Positive Stop (Not Analyzed)
5-27 <small>411703311-0022</small>	Interior Window Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
5-28 <small>411703311-0023</small>	Interior Window Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected

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

Anupriya Tyagi (28)

Lyterra Barrow (13)

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: 05/03/2017 11:01:45



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273  
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<http://www.EMSL.com> / [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

**EMSL Order:** 411703311  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/27/2017 10:00 AM  
**Analysis Date:** 05/08/2017  
**Collected Date:** 04/25/2017  
**Project:** Cammie Clagett Building #5

## 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
5-14-Tan Floor Tile 411703311-0024	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-14-Mastic 411703311-0025	12x12 Tan Speckled F.T. w/ Mastic over 12x12 Brown Streaked F.T. w/ Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-17 411703311-0026	White HVAC Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-20 411703311-0027	Kitchen Counter Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-23 411703311-0028	Bathroom Shower Stall Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-29 411703311-0029	Interior Window Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Derrick Young (6)

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: 05/08/2017 15:50:59

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

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

7767

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolivero@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 5		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	<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>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"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)	<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:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	<b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only) <b>Other:</b> <input type="checkbox"/>

Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Oliver Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
5-39	HVAC tape w/ mastik	PLM	
40		I	
41		TEM	

Client Sample # (s): 39-44 + 48-59 Total # of Samples: 118

Relinquished (Client): [Signature] Date: 12-4-17 Time:

Received (Lab): [Signature] Date: 12/6/17 Time: 9AM

Comments/Special Instructions: (10) FAX 795379784183



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

7767

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
5-42	Roof & awning shingles (3) &	PLM	
43	felt (1)	↓	
44		TEM	
45	Sample #'s not used		
46			
47			
48	Awning & flashing caulk	PLM	
49		↓	
50		TEM	
51	Roof gable vent caulk	PLM	
52		↓	
53		TEM	
54	Painted metal pipe - vent pipes	PLM	
55		↓	
56		↓	
57	Black & gray mastic on roof	PLM	
58	penetrations	↓	
59		TEM	
*Comments/Special Instructions:			



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707767

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017 - 12/12/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 5

## 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
5-39-Tape <small>021707767-0001</small>	HVAC Tape/ Mastic	Gray/Silver Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
5-39-Mastic <small>021707767-0001A</small>	HVAC Tape/ Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
5-40-Tape <small>021707767-0002</small>	HVAC Tape/ Mastic	Gray/Tan/Silver Fibrous Heterogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
5-40-Mastic <small>021707767-0002A</small>	HVAC Tape/ Mastic	Tan/Yellow Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
5-42-Shingle 1 <small>021707767-0004</small>	Roof/ Awning Shingles/Felt	Brown/Red/Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
5-42-Shingle 2 <small>021707767-0004A</small>	Roof/ Awning Shingles/Felt	Brown/Red/Black Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
5-42-Shingle 3 <small>021707767-0004B</small>	Roof/ Awning Shingles/Felt	Black/Green Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
5-42-Felt <small>021707767-0004C</small>	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
5-43-Shingle 1 <small>021707767-0005</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
5-43-Shingle 2 <small>021707767-0005A</small>	Roof/ Awning Shingles/Felt	Brown/Orange Fibrous Heterogeneous	<1% Cellulose 8% Glass	92% Non-fibrous (Other)	None Detected
5-43-Shingle 3 <small>021707767-0005B</small>	Roof/ Awning Shingles/Felt	Tan/Black/Green Fibrous Heterogeneous	<1% Cellulose 8% Glass	92% Non-fibrous (Other)	None Detected
5-43-Felt <small>021707767-0005C</small>	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
5-48 <small>021707767-0007</small>	Awning/Flashing Caulk	Gray/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-49 <small>021707767-0008</small>	Awning/Flashing Caulk	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
5-51 <small>021707767-0010</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-52 <small>021707767-0011</small>	Roof Goble Vent Caulk	Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 09:56:44



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707767  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-54 <small>021707767-0013</small>	Painted Metal Pipe-Vent Pipes	Gray/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-55 <small>021707767-0014</small>	Painted Metal Pipe-Vent Pipes	Gray/Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-56 <small>021707767-0015</small>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
5-57 <small>021707767-0016</small>	Black/Gray Mastic on Roof Penetrations	Gray/Black Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
5-58 <small>021707767-0017</small>	Black/Gray Mastic on Roof Penetrations				Positive Stop (Not Analyzed)

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

Kristie Elliott (11)

Scott Combs (9)

Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 12/12/2017 09:56:44



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707767  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 5

## 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
5-41-Tape 021707767-0003	HVAC Tape/ Mastic	Silver Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-41-Mastic 021707767-0003A	HVAC Tape/ Mastic	Tan Fibrous Heterogeneous	100	None	No Asbestos Detected
5-44-Shingle 1 021707767-0006	Roof/ Awning Shingles/Felt	Red/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
5-44-Shingle 2 021707767-0006A	Roof/ Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
5-44-Shingle 3 021707767-0006B	Roof/ Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
5-44-Felt 021707767-0006C	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
5-50 021707767-0009	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-53 021707767-0012	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
5-59 021707767-0018	Black/Gray Mastic on Roof Penetrations				

Positive Stop (Not Analyzed)

Analyst(s)

Stephen Bennett (8)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/11/2017 17:16:26



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (Lab Use Only):

411703368

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Turnaround Time (TAT) Options\* - Please Check

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group      Date Sampled: 4-26-17

Samplers Name: Ted Shultz      Samplers Signature: [Signature]

Sample #	HA #	Sample Location	Material Description
<u>6-1</u>			<u>drywall + joint compound</u>
<u>6-2</u>			
<u>6-3</u>			
<u>6-4</u>			
<u>6-5</u>			
<u>6-6</u>			
<u>6-7</u>			

Client Sample # (s): <u>1-44</u>	Total # of Samples:
Relinquished (Client): <u>[Signature]</u> Date: <u>4-27-16</u>	Time: <u>NOON</u>
Received (Lab): <u>[Signature]</u> Date: <u>4/28/17</u>	Time: <u>11:00AM Fx</u>
Comments/Special Instructions: <small>Please utilize positive stop analysis.</small>	<u>7952 7865 6126</u>
<small>Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:</small>	



EMSL ANALYTICAL, INC.  
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**Asbestos Bulk Building Material  
Chain of Custody**

EMSL Order Number (Lab Use Only):

411703368

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	HA #	Sample Location	Material Description
6-8			Plaster w/ finish over
6-9			unfinished dry wall
6-10		(no dry wall)	<del>dry wall</del>
6-11			
6-12		(Top layer)	12x12 tan speckled
6-13			F.T. w/ mastic
6-14			
6-15		(Bottom layer)	12x12 Cream F.T.
6-16			w/ mastic
6-17			
6-18			Kitchen counter
6-19			caulk white
6-20			
6-21			HVAC caulk
6-22			
6-23			
6-24			Bathroom shower stall
6-25			& sink caulk
6-26			
6-27			Kitchen sink undercoat
6-28			Black
6-29			

**\*Comments/Special Instructions:**

Please utilize positive stop analysis.  
Bill To: Apex Environmental Management, 7 Winchester Court, Mauldin, SC, 29662, US  
Attention: Rebecca Shultz Phone: 864-404-3210 Email: rshultz@apex-ehs.com Purchase Order:





# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

EMSL Order: 411703368

Customer ID: AXEM25

Customer PO:

Project ID:

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662

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

**Fax:**

**Received Date:** 04/28/2017 11:00 AM

**Analysis Date:** 05/04/2017

**Collected Date:** 04/26/2017

**Project:** Cammie Clagett Building #6

## 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
6-1-Drywall <small>411703368-0001</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-1-White Joint Compound <small>411703368-0001A</small>	Drywall & Joint Compound	White Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
6-1-Tan Joint Compound <small>411703368-0001B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous		30% Ca Carbonate 68% Non-fibrous (Other)	2% Chrysotile
6-2-Drywall <small>411703368-0002</small> <i>Sample bag labeled 6-4</i>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-2-Tan Joint Compound <small>411703368-0002A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
6-3-Drywall <small>411703368-0003</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-3-Tan Joint Compound <small>411703368-0003A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
6-4-Drywall <small>411703368-0004</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-4-Tan Joint Compound <small>411703368-0004A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
6-4-Tape <small>411703368-0004B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	99% Cellulose	1% Non-fibrous (Other)	None Detected
6-5-Drywall <small>411703368-0005</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
6-5-Tan Joint Compound <small>411703368-0005A</small>	Drywall & Joint Compound				Positive Stop (Not Analyzed)
6-5-Tape <small>411703368-0005B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
6-6-Drywall <small>411703368-0006</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected

Initial report from: 05/05/2017 08:05:19



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703368  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-6-White Joint Compound <small>411703368-0006A</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
6-6-Tape <small>411703368-0006B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
6-7-Drywall <small>411703368-0007</small>	Drywall & Joint Compound	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
6-7-White Joint Compound <small>411703368-0007A</small>	Drywall & Joint Compound	White Non-Fibrous Homogeneous		50% Ca Carbonate 50% Non-fibrous (Other)	None Detected
6-7-Tape <small>411703368-0007B</small>	Drywall & Joint Compound	Tan Fibrous Homogeneous	100% Cellulose		None Detected
6-8-Skim Coat <small>411703368-0008</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-8-Rough Coat <small>411703368-0008A</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		20% Quartz 5% Ca Carbonate 75% Non-fibrous (Other)	None Detected
6-8-Drywall <small>411703368-0008B</small>	Plaster w/ Finish over Unfinished Drywall	Brown/Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-9-Skim Coat <small>411703368-0009</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-9-Rough Coat <small>411703368-0009A</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		20% Quartz 5% Ca Carbonate 75% Non-fibrous (Other)	None Detected
6-9-Drywall <small>411703368-0009B</small>	Plaster w/ Finish over Unfinished Drywall	Brown/Gray Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
6-10-Skim Coat <small>411703368-0010</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-10-Rough Coat <small>411703368-0010A</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous		50% Quartz 50% Non-fibrous (Other)	None Detected
6-11-Skim Coat <small>411703368-0011</small>	Plaster w/ Finish over Unfinished Drywall	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-11-Rough Coat <small>411703368-0011A</small>	Plaster w/ Finish over Unfinished Drywall	Gray Non-Fibrous Homogeneous	<1% Cellulose	50% Quartz 50% Non-fibrous (Other)	None Detected
6-11-Drywall <small>411703368-0011B</small>	Plaster w/ Finish over Unfinished Drywall	Gray Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
6-12-Floor Tile <small>411703368-0012</small>	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	Tan Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
6-12-Mastic <small>411703368-0012A</small>	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	Tan Fibrous Homogeneous	1% Cellulose	5% Ca Carbonate 94% Non-fibrous (Other)	None Detected

Initial report from: 05/05/2017 08:05:19



# EMSL Analytical, Inc.

376 Crompton Street Charlotte, NC 28273

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

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

**EMSL Order:** 411703368  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-13-Floor Tile <small>411703368-0013</small>	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	Tan/White Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
6-13-Mastic <small>411703368-0013A</small>	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	Tan Non-Fibrous Homogeneous	2% Cellulose	8% Gypsum 90% Non-fibrous (Other)	None Detected
6-15-Floor Tile <small>411703368-0014</small>	12x12 Cream F.T. w/ Mastic (Bottom Layer)	Beige Non-Fibrous Homogeneous		40% Ca Carbonate 60% Non-fibrous (Other)	None Detected
6-15-Mastic <small>411703368-0014A</small>	12x12 Cream F.T. w/ Mastic (Bottom Layer)	Black Fibrous Homogeneous		94% Non-fibrous (Other)	6% Chrysotile
6-16-Floor Tile <small>411703368-0015</small>	12x12 Cream F.T. w/ Mastic (Bottom Layer)	White Non-Fibrous Homogeneous		35% Ca Carbonate 65% Non-fibrous (Other)	None Detected
6-16-Mastic <small>411703368-0015A</small>	12x12 Cream F.T. w/ Mastic (Bottom Layer)				Positive Stop (Not Analyzed)
6-18 <small>411703368-0016</small>	Kitchen Counter Caulk - White	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-19 <small>411703368-0017</small>	Kitchen Counter Caulk - White	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-21 <small>411703368-0018</small>	HVAC Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-22 <small>411703368-0019</small>	HVAC Caulk	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-24 <small>411703368-0020</small>	Bathroom Shower Stall & Sink Caulk	White Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected
6-25 <small>411703368-0021</small>	Bathroom Shower Stall & Sink Caulk	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
6-27 <small>411703368-0022</small>	Kitchen Sink Undercoat - Black	Black Fibrous Homogeneous		35% Ca Carbonate 60% Non-fibrous (Other)	5% Chrysotile
6-28 <small>411703368-0023</small>	Kitchen Sink Undercoat - Black				Positive Stop (Not Analyzed)
6-30 <small>411703368-0024</small>	Window Caulk - Black	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
6-31 <small>411703368-0025</small>	Window Caulk - Black	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
6-33 <small>411703368-0026</small>	Kitchen Sink Undercoat - White	White Fibrous Homogeneous	5% Cellulose	5% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-34 <small>411703368-0027</small>	Kitchen Sink Undercoat - White	White Non-Fibrous Homogeneous	10% Cellulose	5% Ca Carbonate 5% Mica 80% Non-fibrous (Other)	None Detected
6-36 <small>411703368-0028</small>		Gray/Tan Fibrous Homogeneous	3% Glass	97% Non-fibrous (Other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-37 <small>411703368-0029</small>		Gray/Tan Non-Fibrous Homogeneous	5% Glass	8% Ca Carbonate 87% Non-fibrous (Other)	None Detected
6-39 <small>411703368-0030</small>		Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-40 <small>411703368-0031</small>		Brown/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-42 <small>411703368-0032</small>		Gray Fibrous Homogeneous	15% Glass	15% Quartz 5% Ca Carbonate 65% Non-fibrous (Other)	None Detected
6-43 <small>411703368-0033</small>		Gray Fibrous Homogeneous	4% Glass	15% Quartz 81% Non-fibrous (Other)	None Detected

Analyst(s)

Aaron Hartley (26)

Lacy Searcy (24)

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: 05/05/2017 08:05:19



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

**EMSL Order:** 411703368  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/28/2017 11:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/26/2017  
**Project:** Cammie Clagett Building #6

## 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
6-14-Floor Tile 411703368-0034	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-14-Mastic 411703368-0035	12x12 Tan Speckled F.T. w/ Mastic (Top Layer)	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-17-Floor Tile 411703368-0036	12x12 Cream F.T. w/ Mastic (Bottom Layer)	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-20 411703368-0037	Kitchen Counter Caulk - White	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-23 411703368-0038	HVAC Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-26 411703368-0039	Bathroom Shower Stall & Sink Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-32 411703368-0040	Window Caulk - Black	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-35 411703368-0041	Kitchen Sink Undercoat - White	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-38 411703368-0042	Door Frames - Grey Door Caulk	Brown Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
6-41 411703368-0043	Window Casings - Black Window Caulk	Black Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
6-44 411703368-0044	Exterior Brick Penetrations - Grey Penetration Mastic	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Charlotte, NC

Initial report from: 05/10/2017 15:18:20



**EMSL Analytical, Inc.**

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

**EMSL Order:** 411703368  
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**Project ID:**

**Attention:** Nicholas Neerhof  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 04/28/2017 11:00 AM  
**Analysis Date:** 05/10/2017  
**Collected Date:** 04/26/2017  
**Project:** Cammie Clagett Building #6

**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**

---

Analyst(s)

Derrick Young (11)

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: 05/10/2017 15:18:20

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7766

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolover@apex-ehs.com		Purchase Order:	
Project Name/Number: Carmie Clagoff Bldg 6		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options\* - Please Check

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

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

<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	<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>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"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)	<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>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)

Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Oliver Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
6-45	HVAC tape w/ mastic	PLM	
46		I	
47		TEM	

Client Sample # (s): 45-50 + 54-65 Total # of Samples: 13/18

Relinquished (Client): [Signature] Date: 12-4-17 Time:

Received (Lab): [Signature] Date: 12/6/17 Time: 9am

Comments/Special Instructions: (6) EX 795379784183



EMSL ANALYTICAL, INC.  
EN LAB LABORATORY • PRODUCTS • TRAINING

**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

7766

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
6- 48	Roof & awning shingles (3) ↓	PLM	
49	felt (1) ↓	↓	
50		TEM	
51	Sample #'s not used		
52			
53			
54	Awning & flashing caulk ↓	PLM	
55		↓	
56		TEM	
57	Roof gable vent caulk ↓	PLM	
58		↓	
59		TEM	
60	Painted metal pipe - vent pipes ↓	PLM	
61		↓	
62		↓	
63	Black & gray mastic on roof ↓	PLM	
64	penetrations ↓	↓	
65		TEM	

\*Comments/Special Instructions:



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707766

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017 - 12/12/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 6

## 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
6-45-Tape <small>021707766-0001</small>	HVAC Tape/Mastic	Silver Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
6-45-Mastic <small>021707766-0001A</small>	HVAC Tape/Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
6-46-Tape <small>021707766-0002</small>	HVAC Tape/Mastic	Gray/Tan/Silver Fibrous Heterogeneous	45% Cellulose	55% Non-fibrous (Other)	None Detected
6-46-Mastic <small>021707766-0002A</small>	HVAC Tape/Mastic	Tan Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
6-48-Shingle 1 <small>021707766-0004</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
6-48-Shingle 2 <small>021707766-0004A</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
6-48-Shingle 3 <small>021707766-0004B</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Homogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
6-48-Felt <small>021707766-0004C</small>	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	65% Cellulose	35% Non-fibrous (Other)	None Detected
6-49-Shingle 1 <small>021707766-0005</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 8% Glass	92% Non-fibrous (Other)	None Detected
6-49-Shingle 2 <small>021707766-0005A</small>	Roof/ Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
6-49-Shingle 3 <small>021707766-0005B</small>	Roof/ Awning Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
6-49-Felt <small>021707766-0005C</small>	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
6-54 <small>021707766-0007</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-55 <small>021707766-0008</small>	Awning/Flashing Caulk	Tan/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 09:54:32



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**EMSL Order:** 021707766  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
6-57-Gray Caulk <small>021707766-0010</small>	Roof Goble Vent Caulk	Gray Non-Fibrous Homogeneous	1% Glass	10% Ca Carbonate 89% Non-fibrous (Other)	None Detected
6-57-Beige Caulk <small>021707766-0010A</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-58-Gray Caulk <small>021707766-0011</small>	Roof Goble Vent Caulk	Gray Non-Fibrous Homogeneous	<1% Glass	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-58-Beige Caulk <small>021707766-0011A</small>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
6-60 <small>021707766-0013</small>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-61 <small>021707766-0014</small>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-62 <small>021707766-0015</small>	Painted Metal Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
6-63 <small>021707766-0016</small>	Black/Gray Mastic on Roof Penetrations	Gray/Black Fibrous Homogeneous		95% Non-fibrous (Other)	5% Chrysotile
6-64 <small>021707766-0017</small>	Black/Gray Mastic on Roof Penetrations				Positive Stop (Not Analyzed)

Analyst(s) \_\_\_\_\_  
 Kristie Elliott (12)  
 Scott Combs (10)

  
 \_\_\_\_\_  
 Stephen Bennett, Laboratory Manager  
 or Other Approved Signatory

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

Initial report from: 12/12/2017 09:54:32



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**EMSL Order:** 021707766  
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**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 6

## 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
6-47-Tape 021707766-0003	HVAC Tape/Mastic	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-47-Mastic 021707766-0003A	HVAC Tape/Mastic	Tan Fibrous Heterogeneous	100	None	No Asbestos Detected
6-50-Shingle 1 021707766-0006	Roof/ Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
6-50-Shingle 2 021707766-0006A	Roof/ Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
6-50-Shingle 3 021707766-0006B	Roof/ Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
6-50-Felt 021707766-0006C	Roof/ Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
6-56 021707766-0009	Awning/Flashing Caulk	Gray/Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
6-59-Grey Caulk 021707766-0012	Roof Goble Vent Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-59-Beige Caulk 021707766-0012A	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
6-65 021707766-0018	Black/Gray Mastic on Roof Penetrations				
Positive Stop (Not Analyzed)					

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/11/2017 17:46:00



**EMSL Analytical, Inc.**

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707766  
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**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Project:** Cammie Clagett Bldg. 6

**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017

**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
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Analyst(s)

Stephen Bennett (9)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/11/2017 17:46:00

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7769

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolivera@apex-ehs.com		Purchase Order:	
Project Name/Number: Connie Clasett Bldg 36		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

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

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

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

<p><b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY</p> <p><input type="checkbox"/> NIOSH 7400</p> <p><input type="checkbox"/> w/ OSHA 8hr. TWA</p> <p><b>PLM - Bulk (reporting limit)</b></p> <p><input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA NOB (&lt;1%)</p> <p>Point Count</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p>Point Count w/Gravimetric</p> <p><input type="checkbox"/> 400 (&lt;0.25%) <input type="checkbox"/> 1000 (&lt;0.1%)</p> <p><input type="checkbox"/> NYS 198.1 (friable in NY)</p> <p><input type="checkbox"/> NYS 198.6 NOB (non-friable-NY)</p> <p><input type="checkbox"/> NYS 198.8 SOF-V</p> <p><input type="checkbox"/> NIOSH 9002 (&lt;1%)</p>	<p><b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only)</p> <p><input type="checkbox"/> AHERA 40 CFR, Part 763</p> <p><input type="checkbox"/> NIOSH 7402</p> <p><input type="checkbox"/> EPA Level II</p> <p><input type="checkbox"/> ISO 10312</p> <p><b>TEM - Bulk</b></p> <p><input checked="" type="checkbox"/> TEM EPA NOB</p> <p><input type="checkbox"/> NYS NOB 198.4 (non-friable-NY)</p> <p><input type="checkbox"/> Chatfield SOP</p> <p><input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5</p> <p><b>TEM - Water:</b> EPA 100.2</p> <p>Fibers &gt;10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p> <p>All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking</p>	<p><b>TEM - Dust</b></p> <p><input type="checkbox"/> Microvac - ASTM D 5755</p> <p><input type="checkbox"/> Wipe - ASTM D6480</p> <p><input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167)</p> <p><b>Soil/Rock/Vermiculite</b></p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (&lt;1%)</p> <p><input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (&lt;0.25%)</p> <p><input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (&lt;0.1%)</p> <p><input type="checkbox"/> TEM Qualitative via Filtration Prep</p> <p><input type="checkbox"/> TEM Qualitative via Drop Mount Prep</p> <p><input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)</p> <p><b>Other:</b></p> <p><input type="checkbox"/></p>
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Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Oliver Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
36-1	Drywall w/ Joint compound +	PLM	
2	tape		
3			
4			
5			

Client Sample # (s): 1-45 + 49-66	Total # of Samples: 103
Relinquished (Client):	Date: 12-4-17 Time:
Received (Lab):	Date: 12/6/17 Time: 9am
Comments/Special Instructions: ③ ETX 795379784161	

EMSL Analytical, Inc.  
376 Crompton Street



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ENVIRONMENTAL LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7769

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
36-6	Drywall w/ Joint compound &	PLM	
7	tape		
8	Plaster w/ finish over unfinished	PLM	
9	drywall		
10			
11			
12			
13	12"x12" tan speckled floor tile &	PLM	
14	mastic (top layer)		
15		TEM	
16	HVAC tape & mastic	PLM	
17			
18		TEM	
19	Kitchen counter caulk	PLM	
20			
21		TEM	
22	Bathroom sink caulk	PLM	
23			
24		TEM	
25	<del>Black sink coating</del> <sup>T.O.</sup> HVAC	PLM	
26	caulk	+	
27		TEM	
<del>28</del> T.O.	<del>Black sink coating</del> T.O.	PLM T.O.	

\*Comments/Special Instructions:

EMSL Analytical, Inc.  
376 Crompton Street



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EN LAB LABORATORY PRODUCTS TRAINING

**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

7769

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
36- 28	Black sink coating	PLM	
29		I	
30		TEM	
31	Shower stall caulk	PLM	
32		I	
33		TEM	
34	Interior window caulk - white	PLM	
35	hard	I	
36		TEM	
37	Black sink pad	PLM	
38		I	
39		TEM	
40	Interior window caulk - soft	PLM	
41	white	I	
42		TEM	
43	Roof & owning shingles (2) &	PLM	
44	felt (1)	I	
45		TEM	
46	Sample #'s not used		
47			
48			

\*Comments/Special Instructions:

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
EN LABORATORY PRODUCTS TRAINING  
LAB

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

7769

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
36-49	Awnings / flashing caulk	PLM	
50			
51		TEM	
52	Black window caulk	PLM	
53			
54		TEM	
55	Exterior door caulk	PLM	
56			
57		TEM	
58	Roof gable vent caulk	PLM	
59			
60		TEM	
61	Metal painted pipe - vent pipes	PLM	
62			
63		TEM	
64	Black + gray mastic on roof	PLM	
65	penetrations		
66		TEM	
*Comments/Special Instructions:			



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

<b>EMSL Order:</b> 021707769
<b>Customer ID:</b> AXEM25
<b>Customer PO:</b>
<b>Project ID:</b>

<b>Attention:</b> Tom Oliver Apex Environmental Management 7 Winchester Court Mauldin, SC 29662	<b>Phone:</b> (864) 640-5274 <b>Fax:</b> <b>Received Date:</b> 12/06/2017 9:00 AM <b>Analysis Date:</b> 12/10/2017 - 12/11/2017 <b>Collected Date:</b> 12/04/2017
<b>Project:</b> Cammie Clagett Bldg. 36	

## 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
36-1-Drywall <small>021707769-0001</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-1-Joint Compound <small>021707769-0001A</small>	Drywall/Joint Compound/Tape	Gray/Beige Fibrous Homogeneous	3% Cellulose	25% Ca Carbonate 69% Non-fibrous (Other)	3% Chrysotile
36-1-Tape <small>021707769-0001B</small>	Drywall/Joint Compound/Tape	Beige Fibrous Homogeneous	100% Cellulose		None Detected
36-2-Drywall <small>021707769-0002</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
36-2-Joint Compound <small>021707769-0002A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
36-2-Tape <small>021707769-0002B</small>	Drywall/Joint Compound/Tape	Beige Fibrous Homogeneous	100% Cellulose		None Detected
36-3-Drywall <small>021707769-0003</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
36-3-Joint Compound <small>021707769-0003A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
36-4-Drywall <small>021707769-0004</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-4-Joint Compound <small>021707769-0004A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
36-5-Drywall <small>021707769-0005</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-5-Joint Compound <small>021707769-0005A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
36-6-Drywall <small>021707769-0006</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-6-Joint Compound <small>021707769-0006A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
36-7-Drywall <small>021707769-0007</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-7-Joint Compound <small>021707769-0007A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)

Initial report from: 12/11/2017 14:54:39



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706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707769  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
36-8-Skim Coat <small>021707769-0008</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-8-Rough Coat <small>021707769-0008A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
36-8-Drywall <small>021707769-0008B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-9-Texture <small>021707769-0009</small>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
36-9-Skim Coat <small>021707769-0009A</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-9-Rough Coat <small>021707769-0009B</small>	Plaster w/ Finish Over Unfinished Drywall	Gray Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
36-9-Drywall <small>021707769-0009C</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-10-Skim Coat <small>021707769-0010</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-10-Rough Coat <small>021707769-0010A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
36-10-Drywall <small>021707769-0010B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	25% Cellulose	75% Non-fibrous (Other)	None Detected
36-11-Skim Coat <small>021707769-0011</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-11-Rough Coat <small>021707769-0011A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
36-11-Drywall <small>021707769-0011B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
36-12-Skim Coat <small>021707769-0012</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-12-Rough Coat <small>021707769-0012A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous		30% Quartz 1% Mica 69% Non-fibrous (Other)	None Detected
36-12-Drywall <small>021707769-0012B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
36-13-Floor Tile <small>021707769-0013</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
36-13-Mastic <small>021707769-0013A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-14-Floor Tile <small>021707769-0014</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected

Initial report from: 12/11/2017 14:54:39



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

**EMSL Order:** 021707769  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
36-14-Mastic <small>021707769-0014A</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-16-Tape <small>021707769-0016</small>	HVAC Tape/Mastic	Tan/Silver Fibrous Heterogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
36-16-Mastic <small>021707769-0016A</small>	HVAC Tape/Mastic	Yellow Non-Fibrous Homogeneous	1% Cellulose	99% Non-fibrous (Other)	None Detected
36-17-Tape <small>021707769-0017</small>	HVAC Tape/Mastic	Tan/Silver Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
36-17-Mastic <small>021707769-0017A</small>	HVAC Tape/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-19 <small>021707769-0019</small>	Kitchen Counter Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-20 <small>021707769-0020</small>	Kitchen Counter Caulk	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-22 <small>021707769-0022</small>	Bathroom Sink Coat	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-23 <small>021707769-0023</small>	Bathroom Sink Coat	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-25 <small>021707769-0025</small>	HVAC Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-26 <small>021707769-0026</small>	HVAC Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-28 <small>021707769-0028</small>	Black Sink Coating	Black Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
36-29 <small>021707769-0029</small>	Black Sink Coating				Positive Stop (Not Analyzed)
36-31 <small>021707769-0031</small>	Shower Stall Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-32 <small>021707769-0032</small>	Shower Stall Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-34 <small>021707769-0034</small>	Interior Window Caulk- White Hard	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-35 <small>021707769-0035</small>	Interior Window Caulk- White Hard	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-37 <small>021707769-0037</small>	Black Sink Pad	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-38 <small>021707769-0038</small>	Black Sink Pad	Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 12/11/2017 14:54:39



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**EMSL Order:** 021707769  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
36-40 <small>021707769-0040</small>	Interior Window Caulk-Soft White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-41 <small>021707769-0041</small>	Interior Window Caulk-Soft White	White Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-43-Shingle 1 <small>021707769-0043</small>	Roof/Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
36-43-Shingle 2 <small>021707769-0043A</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
36-43-Felt <small>021707769-0043B</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
36-44-Shingle 1 <small>021707769-0044</small>	Roof/Awning Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
36-44-Shingle 2 <small>021707769-0044A</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
36-44-Felt <small>021707769-0044B</small>	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
36-49 <small>021707769-0046</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-50 <small>021707769-0047</small>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-52 <small>021707769-0049</small>	Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-53 <small>021707769-0050</small>	Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-55 <small>021707769-0052</small>	Exterior Door Caulk	Gray/Tan/White Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-56 <small>021707769-0053</small>	Exterior Door Caulk	Gray/Tan/White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-58 <small>021707769-0055</small>	Roof Gable Vent Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
36-59 <small>021707769-0056</small>	Roof Gable Vent Caulk	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
36-61 <small>021707769-0058</small>	Metal Painted Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
36-62 <small>021707769-0059</small>	Metal Painted Pipe-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 12/11/2017 14:54:39



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

**EMSL Order:** 021707769  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
36-64 <small>021707769-0061</small>	Black/Gray Mastic on Roof Penetrations	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
36-65 <small>021707769-0062</small>	Black/Gray Mastic on Roof Penetrations	Black Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected

Analyst(s) \_\_\_\_\_  
 Nicole Shutts (24)  
 Scott Combs (43)

  
 \_\_\_\_\_  
 Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 12/11/2017 14:54:39



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707769  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 36

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

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
36-15-Floor Tile 021707769-0015	12x12 Tan Speckled Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-15-Mastic 021707769-0015A	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-18-Tape 021707769-0018	HVAC Tape/Mastic	Gray Fibrous Heterogeneous	100	None	No Asbestos Detected
36-18-Mastic 021707769-0018A	HVAC Tape/Mastic	Tan Fibrous Heterogeneous	100	None	No Asbestos Detected
36-21 021707769-0021	Kitchen Counter Caulk	White Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
36-24 021707769-0024	Bathroom Sink Coat	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-27 021707769-0027	HVAC Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-30 021707769-0030	Black Sink Coating				
Positive Stop (Not Analyzed)					
36-33 021707769-0033	Shower Stall Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-36 021707769-0036	Interior Window Caulk-White Hard	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-39 021707769-0039	Black Sink Pad	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-42 021707769-0042	Interior Window Caulk-Soft White	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/11/2017 11:28:39



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707769  
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**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 36

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

Sample ID	Description	Appearance	% Matrix Material	% Non-Asbestos Fibers	Asbestos Types
36-45-Shingle 1 021707769-0045	Roof/Awning Shingles/Felt	Brown/Red/Black Fibrous Heterogeneous	100	None	No Asbestos Detected
36-45-Shingle 2 021707769-0045A	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	100	None	No Asbestos Detected
36-45- Felt 021707769-0045B	Roof/Awning Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected
36-51 021707769-0048	Awning/Flashing Caulk	Gray Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
36-54 021707769-0051	Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-57 021707769-0054	Exterior Door Caulk	Gray/Pink Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
36-60 021707769-0057	Roof Gable Vent Caulk	Beige Non-Fibrous Heterogeneous	100	None	No Asbestos Detected
36-63 021707769-0060	Metal Painted Pipe- Vent Pipes	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
36-66 021707769-0063	Black/Gray Mastic on Roof Penetrations	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (20)

  
Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/11/2017 11:28:39

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7768

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

AXEM25

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolivera@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 37		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*  
Third Party Billing requires written authorization from third party

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

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

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

<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA	<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312	<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>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"/> NYS 198.8 SOF-V <input type="checkbox"/> NIOSH 9002 (<1%)	<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>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<1%) <input type="checkbox"/> PLM EPA 600/R-93/116 with milling prep (<0.25%) <input type="checkbox"/> TEM EPA 600/R-93/116 with milling prep (<0.1%) <input type="checkbox"/> TEM Qualitative via Filtration Prep <input type="checkbox"/> TEM Qualitative via Drop Mount Prep <input type="checkbox"/> Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)
<b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking		<b>Other:</b> <input type="checkbox"/>

Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples):  0.8µm  0.45µm

Samplers Name: Tom Olive Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
37- 1	Drywall w/ joint compound &	PLM	
2	tape		
3			
4			
5			

Client Sample # (s): 1-47 Total # of Samples: 47/47

Relinquished (Client): [Signature] Date: 12-4-17 Time:

Received (Lab): [Signature] Date: 12/6/17 Time: 9am

Comments/Special Instructions: ③ EEx 795 379784161

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
ENVIRONMENTAL LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7768

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
39- 6	Drywall Plaster w/ finish over	PLM	
7	unfinished drywall		
8			
9	Kitchen counter caulk	PLM	
10			
11		TEM	
12	Black metal sink coating	PLM	
13			
14		TEM	
15	Bathroom sink caulk	PLM	
16			
17		TEM	
18	Shower stall caulk	PLM	
19			
20		TEM	
21	Red + white HVAC caulk	PLM	
22			
23		TEM	
24	Beige HVAC mastic	PLM	
25			
26		TEM	

\*Comments/Special Instructions:

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
ENVIRONMENTAL LABORATORY PRODUCTS TRAINING  
LAB

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7768

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
37- 27	12" x 12" tan speckled floor tile	PLM	
28	+ mastic (top layer)	I	
29		TEM	
30	Roof shingles (2) + felt (1)	PLM	
31		I	
32		TEM	
33	Black window caulk	PLM	
34		I	
35		TEM	
36	Grey door caulk	PLM	
37		I	
38		TEM	
39	Metal pipes w/ paint - vent pipes	PLM	
40		I	
41		I	
42	Black mastic on roof penetrating	PLM	
43		I	
44		TEM	
45	Roof gable vent caulk	PLM	
46		I	
47		TEM	

\*Comments/Special Instructions:



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Tel/Fax: (336) 992-1025 / (336) 992-4175

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EMSL Order: 021707768

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/11/2017 - 12/12/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 37

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
37-1-Drywall <small>021707768-0001</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
37-1-Joint Compound <small>021707768-0001A</small>	Drywall/Joint Compound/Tape	Beige Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 66% Non-fibrous (Other)	3% Chrysotile
37-2-Drywall <small>021707768-0002</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
37-2-Joint Compound <small>021707768-0002A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
37-3-Drywall <small>021707768-0003</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
37-3-Joint Compound <small>021707768-0003A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
37-4-Drywall <small>021707768-0004</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
37-4-Joint Compound <small>021707768-0004A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
37-5-Drywall <small>021707768-0005</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
37-5-Joint Compound <small>021707768-0005A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
37-6-Skim Coat <small>021707768-0006</small>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-6-Rough Coat <small>021707768-0006A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
37-6-Drywall <small>021707768-0006B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
37-7-Skim Coat <small>021707768-0007</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-7-Rough Coat <small>021707768-0007A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
37-7-Drywall <small>021707768-0007B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 11:04:36



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
37-8-Skim Coat <small>021707768-0008</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-8-Rough Coat <small>021707768-0008A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 1% Mica 69% Non-fibrous (Other)	None Detected
37-8-Drywall <small>021707768-0008B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
37-9 <small>021707768-0009</small>	Kitchen Counter Caulk	Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
37-10 <small>021707768-0010</small>	Kitchen Counter Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-12 <small>021707768-0012</small>	Black Metal Sink Coating	Brown/Black Non-Fibrous Homogeneous	1% Cellulose	96% Non-fibrous (Other)	3% Chrysotile
37-13 <small>021707768-0013</small>	Black Metal Sink Coating				Positive Stop (Not Analyzed)
37-15 <small>021707768-0015</small>	Bathroom Sink Coat	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-16 <small>021707768-0016</small>	Bathroom Sink Coat	Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-18 <small>021707768-0018</small>	Shower Stall Caulk	Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
37-19 <small>021707768-0019</small>	Shower Stall Caulk	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-21-Red Caulk <small>021707768-0021</small>	Red/White HVAC Caulk	Black/Rust Fibrous Homogeneous	1% Cellulose 5% Synthetic	94% Non-fibrous (Other)	None Detected
37-21-White Caulk <small>021707768-0021A</small>	Red/White HVAC Caulk	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-22-Red Caulk <small>021707768-0022</small>	Red/White HVAC Caulk	Red/Black Non-Fibrous Homogeneous	<1% Cellulose 5% Synthetic	95% Non-fibrous (Other)	None Detected
37-22-White Caulk <small>021707768-0022A</small>	Red/White HVAC Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
37-24 <small>021707768-0024</small>	Beige HVAC Mastic	Beige Non-Fibrous Homogeneous	<1% Cellulose 2% Synthetic	98% Non-fibrous (Other)	None Detected
37-25 <small>021707768-0025</small>	Beige HVAC Mastic	Beige Non-Fibrous Homogeneous	<1% Cellulose 1% Synthetic	10% Ca Carbonate 89% Non-fibrous (Other)	None Detected
37-27-Floor Tile <small>021707768-0027</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
37-27-Mastic <small>021707768-0027A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow/Orange Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 11:04:36



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**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
37-28-Floor Tile <small>021707768-0028</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
37-28-Mastic <small>021707768-0028A</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
37-30-Shingle 1 <small>021707768-0030</small>	Roof Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
37-30-Shingle 2 <small>021707768-0030A</small>	Roof Shingles/Felt	Brown/Black/Green Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
37-30-Felt <small>021707768-0030B</small>	Roof Shingles/Felt	Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
37-31-Shingle 1 <small>021707768-0031</small>	Roof Shingles/Felt	Brown/Black/Orange Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
37-31-Shingle 2 <small>021707768-0031A</small>	Roof Shingles/Felt	Gray/Black/Green Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
37-31-Felt <small>021707768-0031B</small>	Roof Shingles/Felt	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
37-33 <small>021707768-0033</small>	Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-34 <small>021707768-0034</small>	Black Window Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-36 <small>021707768-0036</small>	Grey Door Caulk	Brown/Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose <1% Fibrous (Other)	10% Ca Carbonate 88% Non-fibrous (Other)	2% Chrysotile
37-37 <small>021707768-0037</small>	Grey Door Caulk				Positive Stop (Not Analyzed)
37-39 <small>021707768-0039</small>	Metal Pipes w/ Paint-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-40 <small>021707768-0040</small>	Metal Pipes w/ Paint-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-41 <small>021707768-0041</small>	Metal Pipes w/ Paint-Vent Pipes	Silver Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
37-42 <small>021707768-0042</small>	Black Mastic on Roof Penetrations	Brown/Black Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
37-43 <small>021707768-0043</small>	Black Mastic on Roof Penetrations	Brown/Black Fibrous Homogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
37-45 <small>021707768-0045</small>	Roof Goble Vent Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 12/12/2017 11:04:36



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**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
37-46  021707768-0046	Roof Goble Vent	Beige	<1% Cellulose	10% Ca Carbonate	None Detected
	Caulk	Non-Fibrous		90% Non-fibrous (Other)	
		Homogeneous			

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

Nicole Shutts (19)

Scott Combs (29)

Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, CA ELAP 2689, Virginia 3333-000228, West Virginia LT000321

Initial report from: 12/12/2017 11:04:36



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 37

## 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
37-11 021707768-0011	Kitchen Counter Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-14 021707768-0014	Black Metal Sink Coating				
Positive Stop (Not Analyzed)					
37-17 021707768-0017	Bathroom Sink Coat	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-20 021707768-0020	Shower Stall Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-23-Red Caulk 021707768-0023	Red/White HVAC Caulk	Red/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-23-Greyish Caulk 021707768-0023A	Red/White HVAC Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-26 021707768-0026	Beige HVAC Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-29 021707768-0029	12x12 Tan Speckled Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-29A 021707768-0029A	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-32-Shingel 1 021707768-0032	Roof Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
37-32-Shingle 2 021707768-0032A	Roof Shingles/Felt	Brown/Gray/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
37-32-Felt 021707768-0032B	Roof Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 15:59:57



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 37

## 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
37-35 021707768-0035	Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-38 021707768-0038	Grey Door Caulk				
Positive Stop (Not Analyzed)					
37-44 021707768-0044	Black Mastic on Roof Penetrations	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-47 021707768-0047	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (14)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 15:59:57



EMSL ANALYTICAL, INC.  
LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7768

AXEM25

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

Company Name : Apex Environmental Management		EMSL Customer ID:	
Street: 7 Winchester Court		City: Mauldin	State/Province: SC
Zip/Postal Code: 29662	Country: US	Telephone #: 864-404-3210	Fax #:
Report To (Name): Tom Oliver		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: tolivera@apex-ehs.com		Purchase Order:	
Project Name/Number: Cammie Clagett Bldg 37		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

EMSL-Bill to:  Same  Different - If Bill to is Different note instructions in Comments\*\*

Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options\* - Please Check

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

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

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

Check For Positive Stop - Clearly Identify Homogenous Group

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

Samplers Name: Tom Olive

Samplers Signature: [Signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
37- 1	Drywall w/ joint compound & tape	PLM	35/47
2			
3			
4			
5			

Client Sample # (s): 1-47	Total # of Samples: 47/47
Relinquished (Client): [Signature]	Date: 12-4-17 Time:
Received (Lab): [Signature]	Date: 12/6/17 Time: 9 AM
Comments/Special Instructions: ③ EEX 795 379784161	

EMSL Analytical, Inc.  
376 Crompton Street



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

**Asbestos Chain of Custody**

EMSL Order Number (Lab Use Only):

7768

Charlotte, NC 28273  
PHONE: (704) 525-2205  
FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
39- 6	Drywall Plaster w/ finish over	PLM	
7	unfinished drywall		
8			
9	Kitchen counter caulk	PLM	
10			
11		TEM	
12	Black metal sink coating	PLM	
13			
14		TEM	
15	Bathroom sink caulk	PLM	
16			
17		TEM	
18	Shower stall caulk	PLM	
19			
20		TEM	
21	Red + white HVAC caulk	PLM	
22			
23		TEM	
24	Beige HVAC mastic	PLM	
25			
26		TEM	

\*Comments/Special Instructions:



EMSL ANALYTICAL, INC.  
ENVIRONMENTAL LABORATORY PRODUCTS TRAINING

### Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

7768

EMSL Analytical, Inc.  
376 Crompton Street

Charlotte, NC 28273

PHONE: (704) 525-2205

FAX: (704) 525-2382

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
37- 27	12" x 12" tan speckled floor tile	PLM	
28	& mastic (top layer)	I	
29		TEM	
30	Roof shingles (2) & felt (1)	PLM	
31		I	
32		TEM	
33	Black window caulk	PLM	
34		I	
35		TEM	
36	Grey door caulk	PLM	
37		I	
38		TEM	
39	Metal pipes w/ paint - vent pipes	PLM	
40		I	
41		I	
42	Black mastic on roof penetrating	PLM	
43		I	
44		TEM	
45	Roof gable vent caulk	PLM	
46		I	
47		TEM	

\*Comments/Special Instructions:



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706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

EMSL Order: 021707770

Customer ID: AXEM25

Customer PO:

Project ID:

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

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

**Fax:**

**Received Date:** 12/06/2017 9:00 AM

**Analysis Date:** 12/13/2017

**Collected Date:** 12/04/2017

**Project:** Cammie Clagett Bldg. 38

## 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
38-1-Drywall <small>021707770-0001</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-1-Joint Compound <small>021707770-0001A</small>	Drywall/Joint Compound/Tape	Beige Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 66% Non-fibrous (Other)	3% Chrysotile
38-2-Drywall <small>021707770-0002</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-2-Joint Compound <small>021707770-0002A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-3-Drywall <small>021707770-0003</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-3-Joint Compound <small>021707770-0003A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-4-Drywall <small>021707770-0004</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-4-Joint Compound <small>021707770-0004A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-5-Drywall <small>021707770-0005</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-5-Joint Compound <small>021707770-0005A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-6-Drywall <small>021707770-0006</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-6-Joint Compound <small>021707770-0006A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-7-Drywall <small>021707770-0007</small>	Drywall/Joint Compound/Tape	Brown/Gray Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (Other)	None Detected
38-7-Joint Compound <small>021707770-0007A</small>	Drywall/Joint Compound/Tape				Positive Stop (Not Analyzed)
38-8-Skim Coat <small>021707770-0008</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-8-Rough Coat <small>021707770-0008A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected

Initial report from: 12/13/2017 10:40:45



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-8-Drywall <small>021707770-0008B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-9-Skim Coat <small>021707770-0009</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-9-Rough Coat <small>021707770-0009A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
38-9-Drywall <small>021707770-0009B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
38-10-Skim Coat <small>021707770-0010</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-10-Rough Coat <small>021707770-0010A</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
38-10-Drywall <small>021707770-0010B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-11-Texture <small>021707770-0011</small>	Plaster w/ Finish Over Unfinished Drywall	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
38-11-Skim Coat <small>021707770-0011A</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
38-11-Rough Coat <small>021707770-0011B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray/Tan Non-Fibrous Heterogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
38-11-Drywall <small>021707770-0011C</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-12-Skim Coat <small>021707770-0012</small>	Plaster w/ Finish Over Unfinished Drywall	White Non-Fibrous Homogeneous		20% Ca Carbonate 80% Non-fibrous (Other)	None Detected
38-12-Rough Coat <small>021707770-0012A</small>	Plaster w/ Finish Over Unfinished Drywall	Gray/Tan Non-Fibrous Heterogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
38-12-Drywall <small>021707770-0012B</small>	Plaster w/ Finish Over Unfinished Drywall	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-13-Floor Tile <small>021707770-0013</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-13-Mastic <small>021707770-0013A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-14-Floor Tile <small>021707770-0014</small>	12x12 Tan Speckled Floor Tile/Mastic	Tan/Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-14-Mastic <small>021707770-0014A</small>	12x12 Tan Speckled Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-16-Floor Tile <small>021707770-0016</small>	12x12 Cream Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected

Initial report from: 12/13/2017 10:40:45



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-16-Mastic <small>021707770-0016A</small>	12x12 Cream Floor Tile/Mastic	Black/Yellow Non-Fibrous Heterogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-17-Floor Tile <small>021707770-0017</small>	12x12 Cream Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-17-Mastic <small>021707770-0017A</small>	12x12 Cream Floor Tile/Mastic				Positive Stop (Not Analyzed)
38-19-Floor Tile <small>021707770-0019</small>	12x12 Beige Floor Tile/Mastic	Tan/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-19-Mastic <small>021707770-0019A</small>	12x12 Beige Floor Tile/Mastic	Black/Gold/Orange Non-Fibrous Heterogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	<1% Chrysotile
38-20-Floor Tile <small>021707770-0020</small>	12x12 Beige Floor Tile/Mastic	Tan/White Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-20-Mastic <small>021707770-0020A</small>	12x12 Beige Floor Tile/Mastic	Black/Orange Non-Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-22-Floor Tile <small>021707770-0022</small>	12x12 Light Tan Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-22-Mastic <small>021707770-0022A</small>	12x12 Light Tan Floor Tile/Mastic	Yellow/Gold Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-23-Floor Tile <small>021707770-0023</small>	12x12 Light Tan Floor Tile/Mastic	Beige Non-Fibrous Homogeneous		25% Quartz 75% Non-fibrous (Other)	None Detected
38-23-Mastic <small>021707770-0023A</small>	12x12 Light Tan Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-24-B <small>021707770-0025</small>	Bathroom Sink Caulk	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-25 <small>021707770-0026</small>	Bathroom Sink Caulk	Tan/White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-27 <small>021707770-0028</small>	Shower Stall Caulk	White/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-28 <small>021707770-0029</small>	Shower Stall Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-30 <small>021707770-0031</small>	Kitchen Counter Caulk	White/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
38-31 <small>021707770-0032</small>	Kitchen Counter Caulk	Tan/Beige Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-33-Caulk <small>021707770-0034</small>	HVAC Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-33-Joint Compound <small>021707770-0034A</small>	HVAC Caulk	Tan Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 66% Non-fibrous (Other)	3% Chrysotile

Initial report from: 12/13/2017 10:40:45



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

Tel/Fax: (336) 992-1025 / (336) 992-4175

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

**EMSL Order:** 021707770  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
38-34 <small>021707770-0035</small>	HVAC Caulk	Tan/Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-36-Tape <small>021707770-0037</small>	HVAC Tape/Mastic	Gray/Tan/Silver Fibrous Heterogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
38-36-Mastic <small>021707770-0037A</small>	HVAC Tape/Mastic	Tan/Yellow/Gold Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-37-Tape <small>021707770-0038</small>	HVAC Tape/Mastic	Gray/Tan/Silver Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-37-Mastic <small>021707770-0038A</small>	HVAC Tape/Mastic	Yellow/Gold Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
38-39 <small>021707770-0040</small>	Black Sink Coating	Black Non-Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
38-40 <small>021707770-0041</small>	Black Sink Coating				Positive Stop (Not Analyzed)
38-42 <small>021707770-0043</small>	Interior Window Caulk-White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-43 <small>021707770-0044</small>	Interior Window Caulk-White	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-45-Shingle 1 <small>021707770-0046</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Shingle 2 <small>021707770-0046A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Shingle 3 <small>021707770-0046B</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-45-Felt <small>021707770-0046C</small>	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-46-Shingle 1 <small>021707770-0047</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Shingle 2 <small>021707770-0047A</small>	Roof/Awning Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Shingle 3 <small>021707770-0047B</small>	Roof/Awning Shingles/Felt	Gray/Black Fibrous Heterogeneous	8% Glass	92% Non-fibrous (Other)	None Detected
38-46-Felt <small>021707770-0047C</small>	Roof/Awning Shingles/Felt	Black Fibrous Heterogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
38-48 <small>021707770-0049</small>	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-49 <small>021707770-0050</small>	Painted Metal Pipe-Vent Pipes	Gray Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

Initial report from: 12/13/2017 10:40:45



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## 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
38-51 <i>021707770-0052</i>	Black Mastic on Roof Penetrations	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-52 <i>021707770-0053</i>	Black Mastic on Roof Penetrations	Black Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
38-57 <i>021707770-0055</i>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-58 <i>021707770-0056</i>	Awning/Flashing Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-60 <i>021707770-0058</i>	Interior/Exterior Brown Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-61 <i>021707770-0059</i>	Interior/Exterior Brown Caulk	Brown Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-63 <i>021707770-0061</i>	Door Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-64 <i>021707770-0062</i>	Door Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-66 <i>021707770-0064</i>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
38-67 <i>021707770-0065</i>	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected

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

James Cole (26)  
Scott Combs (49)

Stephen Bennett, Laboratory Manager  
or Other Approved Signatory

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

Initial report from: 12/13/2017 10:40:45



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**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 37

## 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
37-11 021707768-0011	Kitchen Counter Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-14 021707768-0014	Black Metal Sink Coating				
Positive Stop (Not Analyzed)					
37-17 021707768-0017	Bathroom Sink Coat	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-20 021707768-0020	Shower Stall Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-23-Red Caulk 021707768-0023	Red/White HVAC Caulk	Red/Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-23-Greyish Caulk 021707768-0023A	Red/White HVAC Caulk	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-26 021707768-0026	Beige HVAC Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-29 021707768-0029	12x12 Tan Speckled Floor Tile/Mastic	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-29A 021707768-0029A	12x12 Tan Speckled Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-32-Shingel 1 021707768-0032	Roof Shingles/Felt	Brown/Tan/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
37-32-Shingle 2 021707768-0032A	Roof Shingles/Felt	Brown/Gray/Red Fibrous Heterogeneous	100	None	No Asbestos Detected
37-32-Felt 021707768-0032B	Roof Shingles/Felt	Black Fibrous Homogeneous	100	None	No Asbestos Detected

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 15:59:57



# EMSL Analytical, Inc.

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Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [greensborolab@emsl.com](mailto:greensborolab@emsl.com)

**EMSL Order:** 021707768  
**Customer ID:** AXEM25  
**Customer PO:**  
**Project ID:**

**Attention:** Tom Oliver  
Apex Environmental Management  
7 Winchester Court  
Mauldin, SC 29662  
**Phone:** (864) 640-5274  
**Fax:**  
**Received Date:** 12/06/2017 9:00 AM  
**Analysis Date:** 12/11/2017  
**Collected Date:** 12/04/2017  
**Project:** Cammie Clagett Bldg. 37

## 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
37-35 021707768-0035	Black Window Caulk	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-38 021707768-0038	Grey Door Caulk				
Positive Stop (Not Analyzed)					
37-44 021707768-0044	Black Mastic on Roof Penetrations	Black Non-Fibrous Homogeneous	100	None	No Asbestos Detected
37-47 021707768-0047	Roof Goble Vent Caulk	Beige Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (14)

Stephen Bennett, Laboratory Manager  
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 12/12/2017 15:59:57

**APPENDIX V**

**SC DHEC ASBESTOS INSPECTOR LICENSES**

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**SCDHEC ISSUED**  
Asbestos ID Card

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**Thomas H Oliver**



Expiration Date

**AIR SAMPLER AS-00202 03/17/18**  
**CONSULT BI BI-00680 01/18/18**

**SCDHEC ISSUED**  
Asbestos ID Card

**Tedman K Shultz**

Expiration Date



**AIR SAMPLER AS-00355 02/24/18**  
**CONSULT BI-00971 01/18/18**

**North Carolina  
Asbestos Accreditation**



**EXPIRATION**

**02-28-2018**

DOB	SEX	HT	WT
03-16-1972	M	5'10"	275
CLASS	#	EXP	
AIR MONITOR	80864	02-18	
INSPECTOR	12900	01-18	

Tedman K Shultz  
201 Cannon Circle  
Greenville, SC 29607

115007