

# COMPREHENSIVE ASBESTOS SURVEY

COMMERCIAL BUILDING  
311 EAST MAIN STREET  
MONCK'S CORNER, SOUTH CAROLINA 29461



*Prepared For:*

**CITY OF MONCK'S CORNER**  
**Attention: Mr. Jeffrey Lord**  
**PO Box 700**  
**Moncks Corner, SC 294461**  
**(843) 719-7910**

*Performed By:*

**TES**

**Trident Environmental Services, Inc.**

*Consultants in Industrial Hygiene and Safety*  
500 Oakbrook Lane, Suite E  
Summerville, SC 29485  
(843) 873-3648

# COMPREHENSIVE ASBESTOS SURVEY

Commercial Building  
311 East Main Street  
Moncks Corner, South Carolina 29461

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## EXECUTIVE SUMMARY

The comprehensive asbestos survey performed by Trident Environmental Services, Inc. on June 30, 2016 of the Commercial Building located at 311 East Main Street in Moncks Corner, South Carolina **did** reveal the presence of asbestos containing building materials. The following summary exhibits the asbestos containing building materials (ACBM) that were identified in the inspection.

### Asbestos

Description	Type
Roof Cement (black)	Category I – Non Friable
Roof Caulk (white)	Category I – Non Friable
9” Floor Tile (beige)	Category I – Non Friable
Floor Tile Mastic (black)	Category I – Non Friable
Drywall/Joint Compound	RACM – Friable

RACM – Regulated Asbestos Containing Material

\*PACM – Presumed Asbestos Containing Material

The identified asbestos containing building materials (ACBM’s) to include the item(s) listed above. All removal work of the identified ACBM’s should be performed by a properly trained and licensed abatement contractor prior to the planned renovation/demolition activities.

## **BACKGROUND**

Trident Environmental Services, Inc. was contracted by the City of Moncks Corner to perform an asbestos survey of the Commercial Building located at 311 East Main Street in Moncks Corner, South Carolina. The survey was performed in order to satisfy the NESHAP requirements for renovation and/or demolition. The structure is built slab on grade and the area of inspection consists of approximately 5,548 square feet. Roof is constructed with corrugated metal panels. Interior walls are drywall/joint compound and concrete. Ceilings consist of ceiling tiles and drywall/joint compound. Floors are finished with vinyl floor tiles and concrete.

### **Asbestos**

The inspection was conducted to identify asbestos-containing building materials (ACBM) which may be disturbed during the renovation/demolition activities. The identification of ACBM's will aid in the prevention of occupational exposures and/or environmental releases of airborne asbestos fibers. Identification of ACBM also complies with Title 40 Code of the Federal Regulations, Part 61, and South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 61-86.1, along with Title 29 Code of Federal Regulations, Part 1926 enforced by the Occupational Safety and Hazard Administration (OSHA). The Asbestos Survey describes the investigative procedures utilized, results of the suspect ACBM sampled/analyzed, and recommendations regarding the structures as related to asbestos.

## ASBESTOS SURVEY

### Asbestos Investigative Procedures

Trident Environmental Services, Inc. conducted an inspection for suspect ACM's on June 30, 2016 of the Commercial Building located at 311 East Main Street in Moncks Corner, South Carolina. It is our understanding that the subject structure will undergo renovation or demolition activities in the near future. The asbestos survey was performed by observing and sampling suspect building materials. Significant destructive testing was not utilized during the inspection. There is a possibility that suspect materials exist in inaccessible areas such as wall cavities and pipe chases. If any additional suspect ACM's are discovered during the course of demolition activities, bulk samples should be extracted to identify the presence, or absence, of asbestos prior to continuation of work activities.

A sampling strategy was developed to provide representative samples for analysis. Samples were then extracted from a variety of suspect ACM's. Bulk samples collected were recorded on a Chain-of-Custody record and submitted to Electron Microscopy Services Laboratory Analytical, Inc. (EMSL) a Polarized Light Microscopy (PLM) laboratory. The laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by the National Institute of Standards and Technology (NIST). EMSL is accredited by NVLAP for the analysis of bulk asbestos by PLM ([NVLAP Lab Code: 200841-0](#)). NOB samples were submitted to EMSL for analyses by Transmission Electron Microscopy (TEM) as required by SCDHEC.

The suspect materials were analyzed by trained microscopists utilizing PLM techniques coupled with dispersion staining in accordance with EPA Test Method Title 40 Code of Federal Regulations, Chapter I (1-1-87 edition), Part 763, Subpart F- Appendix A. This method identifies asbestos mineral fibers based on six optical characteristics: morphology, birefringence, refractive index, extinction angle, sign of elongation and dispersion staining colors. The laboratory analysis reports the specific type of asbestos identified (there are six asbestos minerals) and the percentage of asbestos present. The EPA and OSHA defines materials as asbestos containing if an asbestos content of greater than one percent (>1%) is detected in a representative sample.

The SCDHEC require NOB materials with negative or trace results by PLM to be analyzed by at least one TEM. SCDHEC in accordance with ASTM E 2356-04 defines NOB materials as "materials that are not friable and that consist of fibers and other particulate matter embedded in a solid matrix of asphalt, vinyl or other organic substances." Examples of NOB materials include but are not limited to flooring materials such as vinyl floor tiles, vinyl sheet flooring, adhesives, mastics, asphalt shingles, roofing materials, glazing, caulks, and cove base.

The EPA classifies ACBM into two categories, friable and non-friable. A friable material creates a greater health hazard due to the fact that it may be “crumbled, pulverized or reduced to powder by the forces expected to act upon it in the course of demolition or renovation operations.”

*Friable Asbestos* material means any material containing more than one percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763 section 1, Polarized Light Microscopy, that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. If the asbestos content is less than 10 percent as determined by a method other than point counting by polarized light microscopy (PLM), verify the asbestos content by point counting using PLM.

*Category I Non Friable Asbestos-Containing Material (ACM)* means asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent asbestos as determined using the method specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy.

*Category II Non Friable ACM* means any material, excluding Category I non friable ACM, containing more than one percent asbestos as determined using the methods specified in appendix A, subpart F, 40 CFR part 763, section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure (cement siding, transite board shingles, etc.).

*Regulated Asbestos-Containing Material (RACM)* means (a) Friable asbestos material, (b) Category I non friable ACM that has become friable, (c) Category I non friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading, or (d) Category II non friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

The following section summarizes the sample numbers, locations, type material, asbestos type, percent of asbestos detected, present condition of the asbestos containing material, potential for disturbance, and hazard assessment ratings. The asbestos sample laboratory analyses and chain of custody records are included at the end of this report.

**Asbestos Abbreviations and Hazard Assessment Key**

The EPA and SCDHEC require that confirmed ACBM is given a hazard assessment based on its present condition and potential for future disturbance. This hazard assessment is used as a tool for prioritization in future remedial actions regarding the ACBM. The following key demonstrates the criteria that make up the hazard assessment.

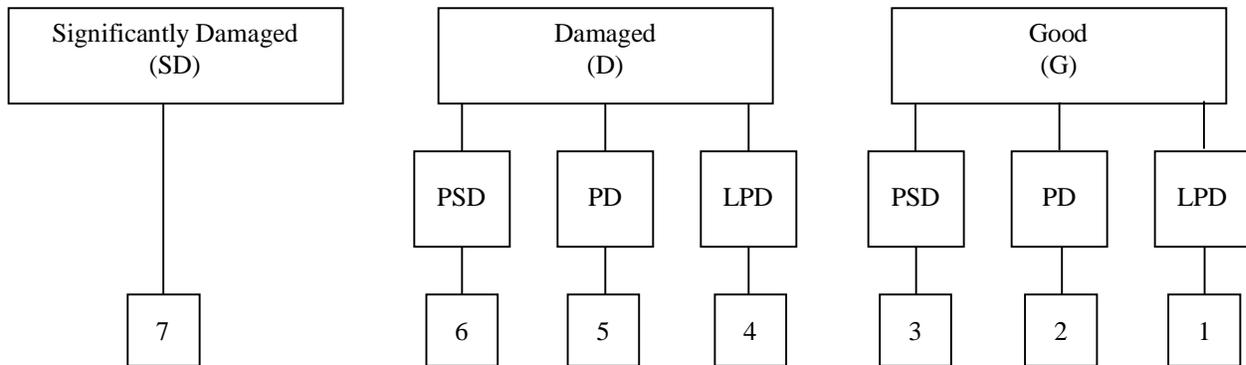
**Present Condition**

- F = Friable
- NF = Non-friable
- G = Good (very localized limited damage)
- D = Damaged (<10% distributed and/or <25% localized)
- S = Significantly Damaged (≥10% distributed and/or 25% localized)

**Potential for Future Disturbance**

- LPD = Low Potential for Disturbance (Contact, Vibration, and/or Air Erosion – low concern)
- PD = Potential for Damage (Contact, Vibration, and/or Air Erosion – moderate concern)
- PSD = Potential for Significant Damage (Contact, Vibration and/or Air Erosion – high concern)

**Hazard Assessment**



**HOMOGENOUS AREA ESTIMATED FOOTAGE TABLE**  
**Commercial Building – 311 East Main Street – Moncks Corner, SC**

<b>HOMOGENOUS AREA ID #</b>	<b>DESCRIPTION</b>	<b>ESTIMATED AMOUNT</b>
<b>01</b>	<b>Roof Cement (black)</b>	<b>500 SF</b>
02	Aluminized Coating	5,548 SF
<b>03</b>	<b>Roof Caulk (white)</b>	<b>550 SF</b>
04	Exterior Caulk	15 SF
<b>05</b>	<b>9" Floor Tile (beige)</b>	<b>110 SF</b>
<b>06</b>	<b>Floor Tile Mastic (black)</b>	<b>110 SF</b>
07	1' x 1' Ceiling Tile (textured)	1,180 SF
08	1' x 1' Ceiling Tile (dots)	40 SF
09	1' x 1' Ceiling Tile (smooth)	1,342 SF
10	Drywall	2,000 SF
<b>11</b>	<b>Joint Compound</b>	<b>2,000 SF</b>

**ASBESTOS SUMMARY**

**Commercial Building – 311 East Main Street – Moncks Corner, SC**

DESCRIPTION	TYPE	ESTIMATED AMOUNT
<b>Roof Cement (black)</b>	<b>Category I – Non Friable</b>	<b>500 SF</b>
<b>Roof Caulk (white)</b>	<b>Category I – Non Friable</b>	<b>550 SF</b>
<b>9” Floor Tile (beige)</b>	<b>Category I – Non Friable</b>	<b>110 SF</b>
<b>Floor Tile Mastic (black)</b>	<b>Category I – Non Friable</b>	<b>110 SF</b>
<b>Drywall/Joint Compound</b>	<b>RACM – Friable</b>	<b>2,000 SF</b>

RACM – Regulated Asbestos Containing Material

\*PACM – Presumed Asbestos Containing Material

Asbestos fibers were identified in the Roof Cement (black). Approximately 500 square feet is present and in good condition. This material is considered Category I – Non Friable Asbestos and is located on the Exterior Roof.

Asbestos fibers were identified in the Roof Caulk (white). Approximately 550 square feet is present and in good condition. This material is considered Category I – Non Friable Asbestos and is located on the Exterior Roof (see diagram).

Asbestos fibers were identified in the 9” Floor Tile (beige). Approximately 110 square feet is present and in good condition. This material is considered Category I – Non Friable Asbestos and is located in the sales area (see diagram).

Asbestos fibers were identified in the Floor Tile Mastic (black). Approximately 110 square feet is present and in good condition. This material is considered Category I – Non Friable Asbestos and is located in the sales area (see diagram).

Asbestos fibers were identified in the Drywall/Joint Compound. Approximately 2,000 square feet is present and in good condition. This material is considered RACM – Friable Asbestos and is located in the sales area and restroom (see diagram).

**The estimated quantities provided should be verified by contractor and/or building owner. Any discrepancies are to be addressed prior to removal of ACM. Please note that removal costs vary depending on the contractor, the quantity/condition of the ACM, and the accessibility/location of the ACM.**

## ASBESTOS SAMPLE DATA TABLE

### Commercial Building – 311 East Main Street – Moncks Corner, SC

DESCRIPTION OF EACH SAMPLE AREA				LABORATORY		ASSESSMENT OF MATERIALS	
Homogeneous Area & Sample ID	Description	Location/Room #	Friable (Y/N)	Asbestos Present		Condition Assessment Category	Hazard Assessment Category
				Percent	Asbestos		
01-01	Roof Cement (black)	Exterior Roof	N	3.0%	CHRY	7	1
01-02	Roof Cement (black)	Exterior Roof	N	NT	PACM	7	1
01-03 T	Roof Cement (black)	Exterior Roof	N	NT	PACM	7	1
02-04	Aluminized Coating	Exterior Roof	N	0.0%	ND	7	N/A
02-05	Aluminized Coating	Exterior Roof	N	0.0%	ND	7	N/A
02-06 T	Aluminized Coating	Exterior Roof	N	0.0%	ND	7	N/A
03-07	Roof Caulk (white)	Exterior Roof	N	<1.0%	CHRY	7	1
03-08	Roof Caulk (white)	Exterior Roof	N	0.0%	PACM	7	1
03-09	Roof Caulk (white)	Exterior Roof	N	2.4%	CHRY	7	1
04-10	Exterior Caulk	Window 1	N	0.0%	ND	7	N/A
04-11	Exterior Caulk	Window 2	N	0.0%	ND	7	N/A
04-12 T	Exterior Caulk	Door 1	N	0.0%	ND	7	N/A
05-13	9" Floor Tile (beige)	Sales Floor	N	4.0%	CHRY	7	1
05-14	9" Floor Tile (beige)	Sales Floor	N	NT	PACM	7	1
05-15	9" Floor Tile (beige)	Sales Floor	N	NT	PACM	7	1
06-16	Floor Tile Mastic (black)	Sales Floor	N	2.0%	CHRY	7	1
06-17	Floor Tile Mastic (black)	Sales Floor	N	NT	PACM	7	1
06-18	Floor Tile Mastic (black)	Sales Floor	N	NT	PACM	7	1
07-19	1' x 1' Ceiling Tile (textured)	Sales Floor	Y	0.0%	ND	7	N/A
07-20	1' x 1' Ceiling Tile (textured)	Sales Floor	Y	0.0%	ND	7	N/A
07-21	1' x 1' Ceiling Tile (textured)	Sales Floor	Y	0.0%	ND	7	N/A
08-22	1' x 1' Ceiling Tile (dots)	Sales Floor	Y	0.0%	ND	7	N/A
08-23	1' x 1' Ceiling Tile (dots)	Sales Floor	Y	0.0%	ND	7	N/A
08-24	1' x 1' Ceiling Tile (dots)	Sales Floor	Y	0.0%	ND	7	N/A
09-25	1' x 1' Ceiling Tile (smooth)	Storage 1	Y	0.0%	ND	7	N/A
09-26	1' x 1' Ceiling Tile (smooth)	Storage 1	Y	0.0%	ND	7	N/A
09-27	1' x 1' Ceiling Tile (smooth)	Storage 1	Y	0.0%	ND	7	N/A
10-28	Drywall	Sales Area	Y	0.0%	ND	7	N/A
10-29	Drywall	Sales Area	Y	0.0%	ND	7	N/A

**Assessment Categories**

- |  |   |
|--|---|
| (1) Thermal Systems Insulation – Good Condition        | (5) Surfacing – Damaged                   |
| (2) Thermal Systems Insulation – Damaged               | (6) Surfacing – Significantly Damaged     |
| (3) Thermal Systems Insulation – Significantly Damaged | (7) Miscellaneous – Good Condition        |
| (4) Surfacing – Good Condition                         | (8) Miscellaneous – Damaged               |
|  | (9) Miscellaneous – Significantly Damaged |

**Asbestos Present**

- |                      |                          |
|----------------------|--------------------------|
| AMOS – Amosite       | ACTI – Actinolite        |
| CHRY – Chrysotile    | ND – None Detected       |
| CROC – Crocidolite   | NT – Not Tested          |
| ANTH – Anthophyllite | PACM – Presumed ACM      |
| TREM – Tremolite     | <b>Asbestos Detected</b> |

**ASBESTOS SAMPLE DATA TABLE**  
**Commercial Building – 311 East Main Street – Moncks Corner, SC**

DESCRIPTION OF EACH SAMPLE AREA				LABORATORY		ASSESSMENT OF MATERIALS	
Homogeneous Area & Sample ID	Description	Location/Room #	Friable (Y/N)	Asbestos Present		Condition Assessment Category	Hazard Assessment Category
				Percent	Asbestos		
10-30	Drywall	Sales Area	Y	0.0%	ND	7	N/A
<b>11-31</b>	<b>Joint Compound</b>	<b>Sales Area</b>	<b>Y</b>	<b>2.0%</b>	<b>CHRY</b>	<b>4</b>	<b>1</b>
<b>11-32</b>	<b>Joint Compound</b>	<b>Sales Area</b>	<b>Y</b>	<b>NT</b>	<b>PACM</b>	<b>4</b>	<b>1</b>
<b>11-33</b>	<b>Joint Compound</b>	<b>Sales Area</b>	<b>Y</b>	<b>NT</b>	<b>PACM</b>	<b>4</b>	<b>1</b>
<b>11-34</b>	<b>Joint Compound</b>	<b>Storage 1</b>	<b>Y</b>	<b>NT</b>	<b>PACM</b>	<b>4</b>	<b>1</b>
<b>11-35</b>	<b>Joint Compound</b>	<b>Storage 2</b>	<b>Y</b>	<b>NT</b>	<b>PACM</b>	<b>4</b>	<b>1</b>

**Assessment Categories**

- |  |   |
|--|---|
| (1) Thermal Systems Insulation – Good Condition        | (5) Surfacing – Damaged                   |
| (2) Thermal Systems Insulation – Damaged               | (6) Surfacing – Significantly Damaged     |
| (3) Thermal Systems Insulation – Significantly Damaged | (7) Miscellaneous – Good Condition        |
| (4) Surfacing – Good Condition                         | (8) Miscellaneous – Damaged               |
|  | (9) Miscellaneous – Significantly Damaged |

**Asbestos Present**

- |                      |                          |
|----------------------|--------------------------|
| AMOS – Amosite       | ACTI – Actinolite        |
| CHRY – Chrysotile    | ND – None Detected       |
| CROC – Crocidolite   | NT – Not Tested          |
| ANTH – Anthophyllite | PACM – Presumed ACM      |
| TREM – Tremolite     | <b>Asbestos Detected</b> |

## CONCLUSIONS/RECOMMENDATIONS

### Asbestos Inspection

The comprehensive asbestos survey performed by Trident Environmental Services, Inc. on June 30, 2016 of the Commercial Building located at 311 East Main Street in Moncks Corner, South Carolina **did** reveal the presence of ACM's. Renovation or demolition activities that will disturb the ACM's will require removal per state and federal regulations. Asbestos materials can become hazardous when, due to damage, disturbance, or deterioration over time, they release asbestos fibers into the air of the building. All areas that contain asbestos should be utilized in a controlled manner to reduce the potential for disturbance. OSHA requires notification to all trades/contractors about the condition of the ACM's to prevent possible occupational exposures.

Demolition activities in public and commercial buildings are regulated by OSHA, EPA, and SCDHEC. Code 40 of Federal Regulations Part 61, Subpart M, Final Rule, "National Emissions Standards for Hazardous Air Pollutants" (NESHAP), and SCDHEC Regulation 61-86.1 require the proper removal and disposal of ACM that is affected by renovation or demolition. Demolition of the subject structures will require written notification, proper transportation, and disposal per state and federal regulations.

**PHOTOGRAPHS**

**Commercial Building – 311 East Main Street – Moncks Corner, SC**



HOMOGENEOUS AREA 01  
ROOF CEMENT (BLACK)



HOMOGENEOUS AREA 02  
ALUMINIZED COATING



HOMOGENEOUS AREA 03  
ROOF CAULK (WHITE)



HOMOGENEOUS AREA 04  
EXTERIOR CAULK

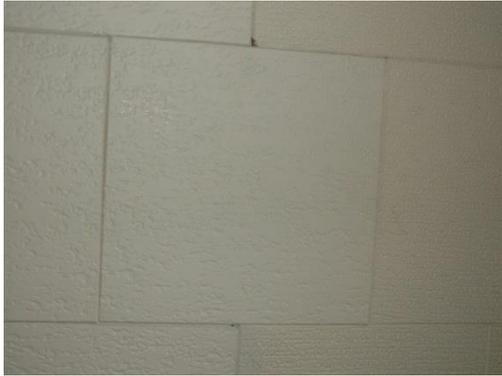


HOMOGENEOUS AREAS 05, 06  
9" FLOOR TILE (BEIGE)  
MASTIC (BLACK)



HOMOGENEOUS AREA 07  
1' x 1' CEILING TILES (TEXTURE)

**PHOTOGRAPHS**  
**311 East Main Street – Moncks Corner, SC**



HOMOGENEOUS AREA 108  
1' x 1' CEILING TILES (DOTS)



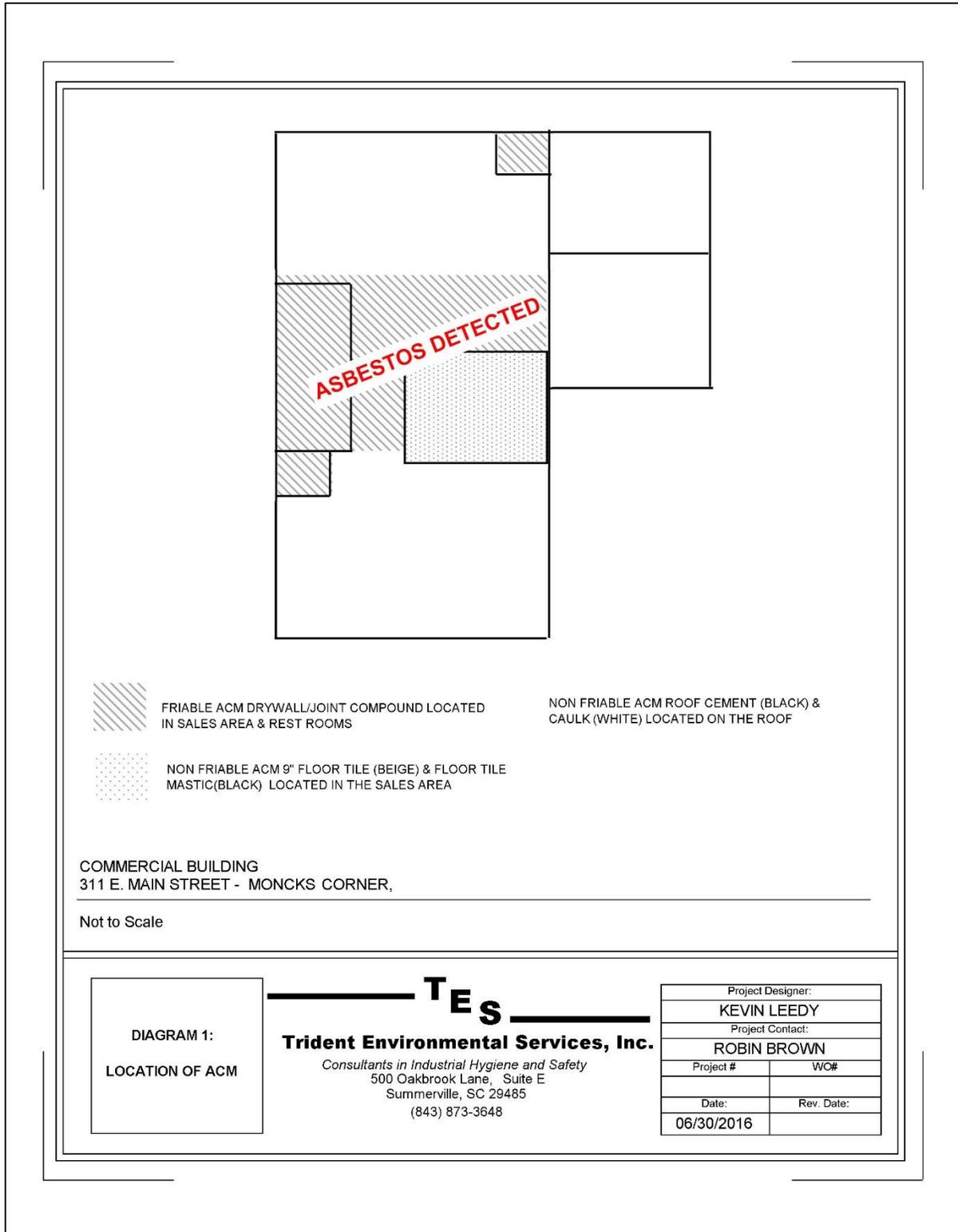
HOMOGENEOUS AREA 09  
1' x 1' CEILING TILES (SMOOTH)



HOMOGENEOUS AREA 10  
DRYWALL



HOMOGENEOUS AREA 11  
JOINT COMPOUND



## COMPREHENSIVE ASBESTOS SURVEY

Inspection Date: 06/30/2016

Preparation Date: 07/05/2016

Inspected & Prepared By:



Hunter Hanson  
S.C. Inspector License BI – 01468

### SCDHEC ISSUED Asbestos ID Card

**Hunter Hanson**

Expiration Date



**AIR SAMPLER AS-00413 01/17/17**  
**CONSULT BI-01468 10/06/16**

Inspected By:



Tim Nickel  
S.C. Inspector License BI – 00844

### SCDHEC ISSUED Asbestos ID Card

**Tim Nickel**

Expiration Date



**AIR SAMPLER AS-00147 01/17/17**  
**CONSULT BI-00844 09/02/16**

United States Department of Commerce  
National Institute of Standards and Technology



**Certificate of Accreditation to ISO/IEC 17025:2005**

NVLAP LAB CODE: 200841-0

**EMSL Analytical, Inc.**  
Charlotte, NC

is accredited by the National Voluntary Laboratory Accreditation Program for specific services,  
listed on the Scope of Accreditation, for:

**Asbestos Fiber Analysis**

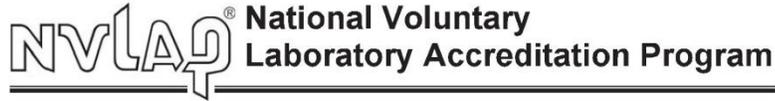
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005.  
This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality  
management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).

2015-06-02 through 2016-06-30  
Effective Dates



A handwritten signature in blue ink, appearing to read "Gary R. M...".

For the National Voluntary Laboratory Accreditation Program



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

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http://www.emsl.com

ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200841-0

Bulk Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A01	EPA 600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Building Materials

Airborne Asbestos Analysis

<u>Code</u>	<u>Description</u>
18/A02	U.S. EPA's "Interim Transmission Electron Microscopy Analytical Methods-Mandatory and Nonmandatory-and Mandatory Section to Determine Completion of Response Actions" as found in 40 CFR, Part 763, Subpart E, Appendix A.

For the National Voluntary Laboratory Accreditation Program



**EMSL Analytical, Inc.**

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

EMSL Order: 411605168  
 Customer ID: TRID50  
 Customer PO:  
 Project ID:

**Attention:** Kevin Leedy  
 Trident Environmental Services, Inc.  
 500 Oakbrook Lane  
 Suite E  
 Summerville, SC 29485  
**Project:** 311 East Main Street, Moncks Corner, SC

**Phone:** (843) 670-9987  
**Fax:**  
**Received Date:** 07/01/2016 9:10 AM  
**Analysis Date:** 07/01/2016  
**Collected Date:** 06/30/2016

**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
01-01 <small>411605168-0001</small>	Exterior Roof - Roof Cement (Black)	Black Fibrous Homogeneous	<1% Cellulose	97% Non-fibrous (Other)	3% Chrysotile
01-02 <small>411605168-0002</small>	Exterior Roof - Roof Cement (Black)				Positive Stop (Not Analyzed)
02-04 <small>411605168-0003</small>	Exterior Roof - Aluminized Coating	Silver Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
02-05 <small>411605168-0004</small>	Exterior Roof - Aluminized Coating	Silver Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
03-07 <small>411605168-0005</small>	Exterior Roof - Roof Caulk (White)	White/Silver Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	<1% Chrysotile
03-08 <small>411605168-0006</small>	Exterior Roof - Roof Caulk (White)	White/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
04-10 <small>411605168-0007</small>	Window 1 - Exterior Caulk	White/Pink Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
04-11 <small>411605168-0008</small>	Window 2 - Exterior Caulk	White Non-Fibrous Homogeneous		8% Ca Carbonate 92% Non-fibrous (Other)	None Detected
05-13 <small>411605168-0009</small>	Sales Floor - 9" Floor Tile (Beige)	Beige Fibrous Homogeneous		30% Ca Carbonate 66% Non-fibrous (Other)	4% Chrysotile
05-14 <small>411605168-0010</small>	Sales Floor - 9" Floor Tile (Beige)				Positive Stop (Not Analyzed)
06-16 <small>411605168-0011</small>	Sales Floor - Floor Tile Mastic (Black)	Black Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
06-17 <small>411605168-0012</small>	Sales Floor - Floor Tile Mastic (Black)				Positive Stop (Not Analyzed)
07-19 <small>411605168-0013</small>	Sales Floor - 1x1 Ceiling Tile (Textured)	Gray Fibrous Homogeneous	45% Cellulose 15% Min. Wool	10% Perlite 30% Non-fibrous (Other)	None Detected
07-20 <small>411605168-0014</small>	Sales Floor - 1x1 Ceiling Tile (Textured)	Gray Fibrous Homogeneous	50% Cellulose 15% Min. Wool	10% Perlite 25% Non-fibrous (Other)	None Detected
07-21 <small>411605168-0015</small>	Sales Floor - 1x1 Ceiling Tile (Textured)	Gray Fibrous Homogeneous	60% Cellulose	10% Perlite 30% Non-fibrous (Other)	None Detected
08-22 <small>411605168-0016</small>	Sales Floor - 1x1 Ceiling Tile (Dots)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected

Initial Report From: 07/02/2016 11:30:00



**EMSL Analytical, Inc.**

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

EMSL Order: 411605168  
 Customer ID: TRID50  
 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
08-23 <i>411605168-0017</i>	Sales Floor - 1x1 Ceiling Tile (Dots)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected
08-24 <i>411605168-0018</i>	Sales Floor - 1x1 Ceiling Tile (Dots)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected
09-25 <i>411605168-0019</i>	Storage 1 - 1x1 Ceiling Tile (Smooth)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected
09-26 <i>411605168-0020</i>	Storage 1 - 1x1 Ceiling Tile (Smooth)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected
09-27 <i>411605168-0021</i>	Storage 1 - 1x1 Ceiling Tile (Smooth)	Brown/White Fibrous Homogeneous	100% Cellulose		None Detected
10-28 <i>411605168-0022</i>	Sales Area - Drywall	White Fibrous Homogeneous	8% Cellulose 2% Glass	90% Non-fibrous (Other)	None Detected
10-29 <i>411605168-0023</i>	Sales Area - Drywall	White Fibrous Homogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
10-30 <i>411605168-0024</i>	Sales Area - Drywall	White Fibrous Homogeneous	10% Cellulose 2% Glass	88% Non-fibrous (Other)	None Detected
11-31 <i>411605168-0025</i>	Sales Area - Joint Compound	Beige Fibrous Homogeneous		45% Ca Carbonate 53% Non-fibrous (Other)	2% Chrysotile
11-32 <i>411605168-0026</i>	Sales Area - Joint Compound				Positive Stop (Not Analyzed)
11-33 <i>411605168-0027</i>	Sales Area - Joint Compound				Positive Stop (Not Analyzed)
11-34 <i>411605168-0028</i>	Storage 1 - Joint Compound				Positive Stop (Not Analyzed)
11-35 <i>411605168-0029</i>	Storage 2 - Joint Compound				Positive Stop (Not Analyzed)

Analyst(s)

Anupriya Tyagi (15)  
 Lyterra Barrow (7)

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: 07/02/2016 11:30:00



**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: 411604914  
 Customer ID: TRID50  
 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
15-46	Sales Area - Floor Mastic on Floor Tile	Tan Non-Fibrous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
411604914-0036	(Yellow)	Homogeneous			

Analyst(s)  
 Kristie Elliott (20)  
 Lyterra Barrow (14)

  
 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: 06/21/2016 15:04:13



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

EMSL Order: 411605168  
 CustomerID: TRID50  
 CustomerPO:  
 ProjectID:

Attn: **Kevin Leedy**  
**Trident Environmental Services, Inc.**  
**500 Oakbrook Lane**  
**Suite E**  
**Summerville, SC 29485**

Phone: (843) 873-3648  
 Fax: (843) 821-1767  
 Received: 07/05/16 8:00 AM  
 Analysis Date: 7/6/2016  
 Collected: 6/30/2016

Project: **311 East Main Street, Moncks Corner, SC**

**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
02-06 411605168-0030	Exterior Roof - Aluminized Coating	Silver Non-Fibrous Homogeneous	99.0	1.0 Fibrous (other)	No Asbestos Detected
03-09 411605168-0031	Exterior Roof - Roof Caulk (White)	White/Silver Fibrous Heterogeneous	97.6	None	2.4% Chrysotile
04-12 411605168-0032	Door 1 - Exterior Caulk	Gray Non-Fibrous Homogeneous	95.8	4.2 Fibrous (other)	No Asbestos Detected

Analyst(s)  
 Derrick Young (3)

*Lee Plumley*

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 07/06/2016 15:31:52

OrderID: 411605168



EMSL ANALYTICAL INC.  
 Environmental Science & Technology

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

411605168

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

<b>Company:</b> TRIDENT ENVIRONMENTAL SERVICES		<b>EMSL Bill to:</b> <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different <small>If Bill to is Different note instructions in Comments*</small>	
<b>Street:</b> 500 Oakbrook Lane Suite E		<small>Third Party Billing requires written authorization from third party</small>	
<b>City:</b> Summerville	<b>State/Province:</b> SC	<b>Zip/Postal Code:</b> 29485	<b>Country:</b> United States
<b>Report To (Name):</b> Kevin Leedy		<b>Telephone #:</b> 8436709987	
<b>Email Address:</b> kevinleedy@tridentenvironmental.com		<b>Fax #:</b>	<b>Purchase Order:</b>
<b>Project Name/Number:</b> 311 East Main Street		<b>Please Provide Results:</b> <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email <input type="checkbox"/> Mail	
<b>U.S. State Samples Taken:</b> SC Moncks Corner		<b>CT Samples:</b> <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 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 800/R-93/116 (<1%) 24HR		<input checked="" type="checkbox"/> TEM EPA NOB – EPA 800/R-93/116 Section 2.5.5.1 22HR	
<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 800/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			
<input checked="" type="checkbox"/> Check For Positive Stop – Clearly Identify Homogenous Group		<b>Date Sampled:</b> 6-30-16	
<b>Samplers Name:</b> Hunter Hanson		<b>Samplers Signature:</b> <i>Hunter Hanson</i>	
<b>Sample #</b>	<b>HA #</b>	<b>Sample Location</b>	<b>Material Description</b>
		See Attached LOC	
<b>Client Sample # (s):</b> -		<b>Total # of Samples:</b> 35	
<b>Relinquished (Client):</b> <i>Hunter Hanson</i>		<b>Date:</b> 6-30-16	<b>Time:</b>
<b>Received (Lab):</b> <i>Kyleen Collier</i>		<b>Date:</b> 7/1/16	<b>Time:</b> 9:10 EMSL FedEx
<b>Comments/Special Instructions:</b> Layer upon request, Positive Stop, So DHEC Rules for NOB			

8060 8891 0633

OrderID: 411605168

411605168

**TES**  
**Trident Environmental Services, Inc.**  
 Consultants in Industrial Hygiene and Safety  
 500 Oakbrook Lane, Suite E  
 Summerville, SC 29485  
 Phone (843) 873-3648  
 Fax (843) 821-1767

**CHAIN OF CUSTODY FORM**  
**Asbestos Bulk Samples**

Project Name: 311 East Main Street Date: 6-30-16  
 Location: Moncks Corner, SC

DESCRIPTION OF EACH SAMPLE AREA					ASSESSMENT OF MATERIALS				
Homog Area	Sample ID	Location	Description	Friable (+)	Friable (-)	Asbestos Type	COND Assess	HAZ Assess	
	01	Exterior Roof	Roof Cement		X		D		
	02		(Black)		X				
T	03				X				
	02		Aluminum roof coating		X		D		
	05				X				
T	06				X				
	03		Roof Caulk		X		D		
	08		(white)		X				
T	09				X				
	04	Window 1	Exterior Caulk		X		D		
	11	Window 2			X				
+	12	Door 1			X				
	05	Stiles Floor	9" Floor tile		X		D		
	14		(Beige)		X				
T	15				X				
	06		Floor tile matrix		X		D		
	17		(Black)		X				
T	18				X				
	07		1x1 ceiling tile	X			D		
	20		(textured)	X					
	21			X					

<b>Condition Assessment Categories</b> (1) Thermal Systems Insulation - Good Condition (2) Thermal Systems Insulation - Damaged (3) Thermal Systems Insulation - Significantly Damaged (4) Surfacing - Good Condition (5) Surfacing - Damaged (6) Surfacing - Significantly Damaged (7) Miscellaneous - Good Condition (8) Miscellaneous - Damaged (9) Miscellaneous - Significantly Damaged	<b>Asbestos Present</b> (1) Amosite (6) Actinolite (2) Chrysotile (3) Crocidolite (4) Anthophyllite (5) Tremolite PACM - Presumed Asbestos Containing Material	<b>HAZARD Assessment Categories</b> G = Good Condition D = Damaged S = Significantly Damaged LPD = Low Potential for Disturbance PD = Potential for Damage PSD = Potential for Significant Damage
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Samples Collected by: Hunter Ham  
 Samples Received by: \_\_\_\_\_

Date / Time: 6-30-16  
 Date / Time: \_\_\_\_\_

OrderID: 411605168

411605168

**TES**  
 Trident Environmental Services, Inc.  
Consultants in Industrial Hygiene and Safety  
 500 Oakbrook Lane, Suite E  
 Summerville, SC 29485  
 Phone (843) 873-3648  
 Fax (843) 821-1767

**CHAIN OF CUSTODY FORM**  
**Asbestos Bulk Samples**

Project Name: 311 East Main Street Date: 6-30-16  
 Location: Moncks Corner, SC

DESCRIPTION OF EACH SAMPLE AREA					ASSESSMENT OF MATERIALS			
Homog Area	Sample ID	Location	Description	Friable (+)	Friable (-)	Asbestos Type	COND Assess	HAZ Assess
08	22	Sales floor	1x1 Ceiling tile	X			7	
	23	↓	(Dots)	X				
	24	↓		X				
09	25	Storage 1	1x1 Ceiling tile	X			7	
	26	↓	(Smooth)	X				
	27	↓		X				
10	28	Sales Area	Drywall	+			7	
	29	↓		X				
	30	↓		X				
11	31	Sales Area	Joint Compound	X			4	
	32	Sales Area		X				
	33	Sales Area		X				
	34	Storage 1		X				
	35	Storage 2		X				

<b>Condition Assessment Categories</b> (1) Thermal Systems Insulation - Good Condition (2) Thermal Systems Insulation - Damaged (3) Thermal Systems Insulation - Significantly Damaged (4) Surfacing - Good Condition (5) Surfacing - Damaged (6) Surfacing - Significantly Damaged (7) Miscellaneous - Good Condition (8) Miscellaneous - Damaged (9) Miscellaneous - Significantly Damaged	<b>Asbestos Present</b> (1) Amosite (6) Actinolite (2) Chrysotile (3) Crocidolite (4) Anthophyllite (5) Tremolite PACM - Presumed Asbestos Containing Material	<b>HAZARD Assessment Categories</b> G = Good Condition D = Damaged S = Significantly Damaged LPD = Low Potential for Disturbance PD = Potential for Damage PSD = Potential for Significant Damage
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Samples Collected by: J. Hunter Hansen Date / Time: 6-30-16  
 Samples Received by: \_\_\_\_\_ Date / Time: \_\_\_\_\_