

# Asbestos Inspection Report

CDBG #4-CE-17-002  
118 Adams Street  
Brunson, South Carolina

Prepared for: Town of Brunson  
Prepared by: Enga Hair, AHERA Building Inspector License #BI-01591  
Project Number:18-217-2  
November 7, 2018  
Revised November 29, 2018

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## EXECUTIVE SUMMARY

The purpose of this investigation was to conduct a limited visual inspection, sample and analyze suspect asbestos containing materials (ACM) which may be disturbed during the future **demolition**, to determine if any occupational exposures and/or environmental releases of airborne asbestos may occur.

The suspect materials were those identified in the United States Environmental Protection Agency (EPA) manual, Guidance for Controlling Asbestos. The identification of ACM meets compliance standards established the EPA under regulation 40 CFR, Part 61, National Emission Standards for Hazardous Air Pollutants, Asbestos NESHAP Revision, Final Rule.

The survey was conducted by licensed inspector Enga Hair - #01591 on November 2, 2018. Additional Joint Compound samples were taken November 24, 2018. Bulk samples were recorded on a Chain of Custody and submitted to a Polarized Light Microscopy (PLM) laboratory. Eurofins|CEI Labs, Inc, located in Cary, North Carolina, is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for satisfactory compliance with criteria established in Title 15, part 7, Code of Regulations, by the National Institute of Standards and Technology (NIST). The laboratory analysis reports the specific type of asbestos identified (there are six (6) types of asbestos minerals) and the percentage of asbestos present.

The EPA defines materials as asbestos containing IF an asbestos content of greater than 1% is detected in a representative sample. The sampling strategy utilized throughout the survey complies with the instructions specified in the EPA Regulation 40 CFR, Part 763.

## BACKGROUND

The structure at 118 Adams Street, Brunson, South Carolina, is scheduled for a future demolition. The residential structure, which consists of multiple bedrooms, kitchen, dining room, living room, and bath, is further described with the following characteristics.

Approximately 880 square feet

Wooden Siding

Wooden windows with no caulk

Wooden floors throughout

Approximately 2,600 square feet of Sheetrock and Joint Compound on walls and ceiling throughout

Approximately 880 square feet of Ceiling Texture throughout

Approximately 950 square feet of Shingles

\* **All Quantities Above are approximate**

## ASBESTOS FINDINGS

The following Table details the eleven (11) Bulk Samples taken; fourteen (14) layers analyzed

Sample #	Description	Classification	Condition	Potential for Disturbance
1	Sheetrock	None Detected	Good	Low
2	Sheetrock	None Detected	Good	Low
3	Sheetrock	None Detected	Good	Low
4	Sheetrock	None Detected	Good	Low
5	Sheetrock	None Detected	Good	Low
6	Ceiling Texture	None Detected	Good	Low
	Joint Compound	None Detected	Good	Low
7	Ceiling Texture	None Detected	Good	Low
	Joint Compound	None Detected	Good	Low
8	Ceiling Texture	None Detected	Good	Low
	Joint Compound	None Detected	Good	Low
9	Shingle	None Detected	Good	Low
10	Shingle	None Detected	Good	Low
11	Shingle	None Detected	Good	Low

## ADDITIONAL ASBESTOS FINDINGS

The following Table details the two (2) Bulk Samples taken

Sample #	Description	Classification	Condition	Potential for Disturbance
1	Joint Compound	None Detected	Good	Low
2	Joint Compound	None Detected	Good	Low

Please refer to the enclosed Asbestos Analysis for additional information

## CONCLUSIONS

The following represents areas that are POSITIVE for Asbestos:

Non-Friable: N/A

Friable: N/A

\* No Asbestos Containing Materials identified during this inspection

PHOTOGRAPHS



PHOTOGRAPH 1



PHOTOGRAPH 2



PHOTOGRAPH 3



PHOTOGRAPH 4



PHOTOGRAPH 5



PHOTOGRAPH 6

# BULK SAMPLE ANALYSIS

November 26, 2018

ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**CLIENT PROJECT:** 118 Adams; Brunson  
**CEI LAB CODE:** A1814311

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on November 5, 2018. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH  
Laboratory Director



CEI

**AMENDED**

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**ASBESTOS ANALYTICAL REPORT**  
**By: Polarized Light Microscopy**

Prepared for

**ECH Consultants**

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CLIENT PROJECT: 118 Adams; Brunson

LAB CODE: A1814311

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 11/06/18

TOTAL SAMPLES ANALYZED: 10

# SAMPLES >1% ASBESTOS:



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AMENDED

# Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 118 Adams; Brunson

LAB CODE: A1814311

METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A168233	Gray	Sheetrock	None Detected
2		A168234	Gray	Sheetrock	None Detected
3		A168235	Gray	Sheetrock	None Detected
4		A168236	Gray	Sheetrock	None Detected
5		A168237	Gray	Sheetrock	None Detected
6	Layer 1	A168238	White	Ceiling Texture	None Detected
	Layer 2	A168238	White	Joint Compound	None Detected
7	Layer 1	A168239	White	Ceiling Texture	None Detected
	Layer 2	A168239	White	Joint Compound	None Detected
8	Layer 1	A168240	White	Ceiling Texture	None Detected
	Layer 2	A168240	White	Joint Compound	None Detected
9		A168241	Gray,Black	Shingle	None Detected
10		A168242	Gray,Black	Shingle	None Detected
11		A168243		Sample Submitted for TEM Analysis	



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# ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

**Client:** ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**Lab Code:** A1814311  
**Date Received:** 11-05-18  
**Date Analyzed:** 11-06-18  
**Date Reported:** 11-06-18

**Project:** 118 Adams; Brunson

## ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
1 A168233	Sheetrock	Heterogeneous	10%	Cellulose	80%	Gypsum	None Detected
		Gray		10%	Binder		
		Fibrous					
		Loosely Bound					
2 A168234	Sheetrock	Heterogeneous	10%	Cellulose	80%	Gypsum	None Detected
		Gray		10%	Binder		
		Fibrous					
		Loosely Bound					
3 A168235	Sheetrock	Heterogeneous	10%	Cellulose	80%	Gypsum	None Detected
		Gray		10%	Binder		
		Fibrous					
		Loosely Bound					
4 A168236	Sheetrock	Heterogeneous	10%	Cellulose	80%	Gypsum	None Detected
		Gray		10%	Binder		
		Fibrous					
		Loosely Bound					
5 A168237	Sheetrock	Heterogeneous	10%	Cellulose	80%	Gypsum	None Detected
		Gray		10%	Binder		
		Fibrous					
		Loosely Bound					
6 Layer 1 A168238	Ceiling Texture	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			20%	Vermiculite	
		Fibrous			8%	Binder	
		Loosely Bound					
Layer 2 A168238	Joint Compound	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			28%	Binder	
		Fibrous					
		Loosely Bound					



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# ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

**Client:** ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**Lab Code:** A1814311  
**Date Received:** 11-05-18  
**Date Analyzed:** 11-06-18  
**Date Reported:** 11-06-18

**Project:** 118 Adams; Brunson

## ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS				ASBESTOS %
			Fibrous		Non-Fibrous		
<b>7</b> Layer 1 A168239	Ceiling Texture	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			20%	Vermiculite	
		Fibrous			8%	Binder	
		Loosely Bound					
Layer 2 A168239	Joint Compound	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			28%	Binder	
		Fibrous					
		Loosely Bound					
<b>8</b> Layer 1 A168240	Ceiling Texture	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			20%	Vermiculite	
		Fibrous			8%	Binder	
		Loosely Bound					
Layer 2 A168240	Joint Compound	Heterogeneous	2%	Cellulose	70%	Calc Carb	None Detected
		White			28%	Binder	
		Fibrous					
		Loosely Bound					
<b>9</b> A168241	Shingle	Heterogeneous	20%	Fiberglass	40%	Tar	None Detected
		Gray,Black			30%	Gravel	
		Fibrous			10%	Binder	
		Bound					
<b>10</b> A168242	Shingle	Heterogeneous	20%	Fiberglass	40%	Tar	None Detected
		Gray,Black			30%	Gravel	
		Fibrous			10%	Binder	
		Bound					
<b>11</b> A168243	Sample Submitted for TEM Analysis						

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**LEGEND:** Non-Anth = Non-Asbestiform Anthophyllite  
Non-Trem = Non-Asbestiform Tremolite  
Calc Carb = Calcium Carbonate

---

**METHOD:** EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

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**REPORTING LIMIT:** <1% by visual estimation

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**REPORTING LIMIT FOR POINT COUNTS:** 0.25% by 400 Points or 0.1% by 1,000 Points

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**REGULATORY LIMIT:** >1% by weight

---

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

This report relates only to the samples tested or analyzed and may not be reproduced, except in full, without written approval by Eurofins CEI. Eurofins CEI makes no warranty representation regarding the accuracy of client submitted information in preparing and presenting analytical results. Interpretation of the analytical results is the sole responsibility of the client. Samples were received in acceptable condition unless otherwise noted. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government.

Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

**ANALYST:**   
Sarah Talley

**APPROVED BY:**   
Tianbao Bai, Ph.D., CIH  
Laboratory Director

AMENDED due to Laboratory Typographical Error -  
Incorrect Sample Description

**CHAIN OF CUSTODY**

 730 SE Maynard Road, Cary, NC 27511  
 Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:

CEI Lab Code:

*A1814311 (11)*

CEI Lab I.D. Range:

*A16223 - A16243*

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1523 Trade Street	Project Name: <i>118 Adams</i>
	Project ID#: <i>Burton</i>
Email: enga@echconsultants.com	PO #:
Tel: 803.807.6488 Fax:	STATE SAMPLES COLLECTED IN: SC

**IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.**

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (400)	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAV w POINT COUNT	EPA 800		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05 (2010)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D5755-09 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-15			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	INHOUSE METHOD		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**REMARKS / SPECIAL INSTRUCTIONS:**

Stop Positives; Combine Samples to make weight for TEM if needed



Accept Samples

Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
<i>Enga Hair</i>	<i>11/3/18 9:40 am</i>	<i>JH</i>	<i>11/5 8:40</i>

Samples will be disposed of 30 days after analysis



November 7, 2018

ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**CLIENT PROJECT:** 118 Adams; Brunson  
**LAB CODE:** T182617

Dear Customer:

Enclosed are asbestos analysis results for TEM bulk samples received at our laboratory on November 6, 2018. The samples were analyzed for asbestos using transmission electron microscopy (TEM) per Chatfield Method.

Sample results containing > 1% asbestos are considered asbestos-containing materials (ACMs) per the EPA regulatory requirements. The detection limit for the TEM Chatfield method is <1% depending on the processed weight and constituents of the sample.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH  
Laboratory Director



CEI

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**ASBESTOS ANALYTICAL REPORT**  
**By: Transmission Electron Microscopy**

Prepared for

**ECH Consultants**

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CLIENT PROJECT: 118 Adams; Brunson

LAB CODE: T182617

TEST METHOD: Bulk Chatfield  
EPA 600 / R93 / 116

REPORT DATE: 11/07/18



CEI

# ASBESTOS BULK ANALYSIS

By: TRANSMISSION ELECTRON MICROSCOPY

**Client:** ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**Lab Code:** T182617  
**Date Received:** 11-06-18  
**Date Analyzed:** 11-07-18  
**Date Reported:** 11-07-18

**Project:** 118 Adams; Brunson

## TEM BULK CHATFIELD / EPA 600 / R93 / 116

Client ID Lab ID	Material Description	Sample Weight (g)	Organic Material %	Acid Soluble Material %	Acid Insoluble Material %	Asbestos %
11 T87106	Gray, Black Shingle	0.635	24.7	51.3	24	None Detected

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**LEGEND:** None

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**METHOD:** CHATFIELD & EPA/600/R-93/116

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**LIMIT OF DETECTION:** Varies with the weight and constituents of the sample (<1%)

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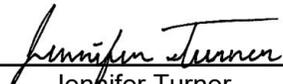
**REGULATORY LIMIT:** >1% by weight

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Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

**ANALYST:**

  
Jennifer Turner

**APPROVED BY:**

  
Tianbao Bai, Ph.D., CIH  
Laboratory Director



7826 N  
787106  
①

# CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511  
Tel: 866-481-1412; Fax: 919-481-1442

LAB USE ONLY:
CEI Lab Code: <u>A1814311(11)</u>
CEI Lab I.D. Range: <u>A165233 - A168243</u>

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: <u>Erga Hair</u>
Company: <u>ECH Consultants</u>	Email / Tel: <u>erga@echoconsultants.com</u>
Address: <u>1823 Trade Street</u>	Project Name: <u>118 Adams</u>
	Project ID: <u>Brunson</u>
Email: <u>erga@echoconsultants.com</u>	PO #:
Tel: <u>803.607.8488</u> Fax:	STATE SAMPLES COLLECTED IN: <u>SC</u>

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PLM BULK	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (400)	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM POINT COUNT (1000)	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM GRAB + POINT COUNT	EPA 800	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PLM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA AHERA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6281-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIPE	ASTM D6480-05 (2010)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D6756-09 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-16	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS: Stop Positives, Combine Samples to make weight for TEM if needed			<input checked="" type="checkbox"/> Accept Samples <input type="checkbox"/> Reject Samples
Relinquished By:	Date/Time	Received By:	Date/Time
<u>Erga Hair</u>	<u>11/5/18 9:40 am</u>	<u>JH</u>	<u>11/5 8:40</u>
<u>Jack Walker</u>	<u>11-4-18 10:00am</u>		

Samples will be disposed of 30 days after analysis



November 29, 2018

ECH Consultants  
1823 Trade Street  
Florence, SC 29501

**CLIENT PROJECT:** 118 Adams, Brunson  
**CEI LAB CODE:** A1815867

Dear Customer:

Enclosed are asbestos analysis results for PLM Bulk samples received at our laboratory on November 28, 2018. The samples were analyzed for asbestos using polarizing light microscopy (PLM) per the EPA 600 Method.

Sample results containing >1% asbestos are considered asbestos-containing materials (ACMs) per EPA regulatory requirements. The detection limit for the EPA 600 Method is <1% asbestos by weight as determined by visual estimation.

Thank you for your business and we look forward to continuing good relations.

Kind Regards,



Tianbao Bai, Ph.D., CIH  
Laboratory Director



CEI

---

# ASBESTOS ANALYTICAL REPORT

## By: Polarized Light Microscopy

Prepared for

**ECH Consultants**

---

CLIENT PROJECT: 118 Adams, Brunson

LAB CODE: A1815867

TEST METHOD: EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

REPORT DATE: 11/29/18

TOTAL SAMPLES ANALYZED: 2

# SAMPLES >1% ASBESTOS:

# Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

**PROJECT:** 118 Adams, Brunson

**LAB CODE:** A1815867

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---

**METHOD:** EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A193576	White	Joint Compound	None Detected
2		A193577	White	Joint Compound	None Detected

# ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

**Client:** ECH Consultants  
 1823 Trade Street  
 Florence, SC 29501

**Lab Code:** A1815867  
**Date Received:** 11-28-18  
**Date Analyzed:** 11-29-18  
**Date Reported:** 11-29-18

**Project:** 118 Adams, Brunson

## ASBESTOS BULK PLM, EPA 600 METHOD

Client ID	Lab	Lab	NON-ASBESTOS COMPONENTS				ASBESTOS
Lab ID	Description	Attributes	Fibrous	Non-Fibrous			%
<b>1</b> A193576	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	5%	Paint Calc Carb	None Detected
<b>2</b> A193577	Joint Compound	Heterogeneous White Fibrous Bound	2%	Cellulose	5%	Paint Calc Carb	None Detected

---

**LEGEND:** Non-Anth = Non-Asbestiform Anthophyllite  
Non-Trem = Non-Asbestiform Tremolite  
Calc Carb = Calcium Carbonate

---

**METHOD:** EPA 600 / R93 / 116 and EPA 600 / M4-82 / 020

---

**REPORTING LIMIT:** <1% by visual estimation

---

**REPORTING LIMIT FOR POINT COUNTS:** 0.25% by 400 Points or 0.1% by 1,000 Points

---

**REGULATORY LIMIT:** >1% by weight

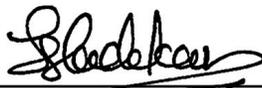
---

Due to the limitations of the EPA 600 method, nonfriable organically bound materials (NOBs) such as vinyl floor tiles can be difficult to analyze via polarized light microscopy (PLM). EPA recommends that all NOBs analyzed by PLM, and found not to contain asbestos, be further analyzed by Transmission Electron Microscopy (TEM). Please note that PLM analysis of dust and soil samples for asbestos is not covered under NVLAP accreditation. *Estimated measurement of uncertainty is available on request.*

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Information provided by customer includes customer sample ID, location, volume and area as well as date and time of sampling.

ANALYST:

  
Shilpa Ladekar

APPROVED BY:

  
Tianbao Bai, Ph.D., CIH  
Laboratory Director



# CHAIN OF CUSTODY

730 SE Maynard Road, Cary, NC 27511  
Tel: 888-481-1412; Fax: 919-481-1442

CEI

LAB USE ONLY:
CEI Lab Code: <i>A1815867 @</i>
CEI Lab ID, Range: <i>AP3576-A192577</i>

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: <i>- Enga Hair</i>
Company: <i>ECH Consultants</i>	Email / Tel: <i>enga@echconsultants.com</i>
Address: <i>1823 Trade Street</i>	Project Name: <i>118 Adams</i>
	Project ID: <i>Brunson</i>
Email: <i>enga@echconsultants.com</i>	PO #:
Tel: <i>903.807.6488</i> Fax:	STATE SAMPLES COLLECTED IN:

IF TAT IS NOT MARKED STANDARD 3 DAY TAT APPLIES.

ASBESTOS	METHOD	TURN AROUND TIME					
		4 HR	8 HR	1 DAY	2 DAY	3 DAY	5 DAY
PJM BULK	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PJM POINT COUNT (400)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PJM POINT COUNT (1000)	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PJM GRAY w/ POINT COUNT	EPA 600	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PJM BULK	CARB 435	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PCM AIR	NIOSH 7400	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	EPA 8160A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	NIOSH 7402	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR (PCME)	ISO 10312	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM AIR	ASTM 6285-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM BULK	CHATFIELD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST WIFE	ASTM D6480-05 (2012)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM DUST MICROVAC	ASTM D6716-06 (2014)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM SOIL	ASTM D7521-15	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM VERMICULITE	CINCINNATI METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TEM QUALITATIVE	IN-HOUSE METHOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
OTHER:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

REMARKS / SPECIAL INSTRUCTIONS:		<input checked="" type="checkbox"/> Accept Samples <input type="checkbox"/> Reject Samples	
Stop Positives; Combine Samples to make weight for TEM if needed			
Relinquished By:	Date/Time	Received By:	Date/Time
<i>Enga Hair</i>	<i>11/26/18 09:10</i>	<i>[Signature]</i>	<i>11/28 10:20 AM</i>

Samples will be disposed of 30 days after analysis



# SCDHEC INSPECTOR LICENSE

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**SCDHEC ISSUED**  
Asbestos ID Card

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**Enga Hair**

	<b>AIRSAMPLER AS-00538</b>	<small>Expiration Date:</small> <b>01/08/19</b>
	<b>SUPERAHERA SA-02878</b>	<b>01/08/19</b>
	<b>CONSULTPD PD-00184</b>	<b>03/21/19</b>
	<b>CONSULTBI BI-01591</b>	<b>01/09/19</b>

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