Asbestos Inspection Report

CDBG #4-CE-17-002

125 Adams Street

Brunson, South Carolina

Prepared for: Town of Brunson

Prepared by: Enga Hair, AHERA Building Inspector License #BI-01591

Project Number:18-217-4

November 7, 2018

Revised November 29, 2018

TABLE OF CONTENTS

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 on 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 125 Adams Street, Brunson, South Carolina, is scheduled for a future demolition. The residential structure, which consists of multiple bedrooms, kitchen, living room, and bathroom, is further described with the following characteristics.

Approximately 750 square feet
Approximately 950 square feet of cementitious siding assumed to be Asbestos
Approximately 175 square feet of Ceiling Texture throughout back bedroom
Carpet with no adhesive throughout
Approximately 40 square feet of VFC with adhesive throughout bathroom
Approximately 1,300 square feet of Sheetrock an Joint Compound on walls throughout
Fiberglass insulation
Metal roof on front portion
Approximately 200 square feet of Shingles on rear portion of roof

* **All Quantities Above are approximate**

ASBESTOS FINDINGS

The following Table details the seventeen (17) Bulk Samples taken; twenty (20) layers analyzed

Sample #	Description	Classification	Condition	Potential for Disturbance
1	Ceiling Texture	None Detected	Good	Low
2	Ceiling Texture	None Detected	Good	Low
3	Ceiling Texture	None Detected	Good	Low
4	Sheetrock	None Detected	Good	Low
5	Sheetrock	None Detected	Good	Low
6	Sheetrock	None Detected	Good	Low
7	Sheetrock	None Detected	Good	Low
8	Sheetrock	None Detected	Good	Low
9	Joint Compound	None Detected	Good	Low
10	Joint Compound	None Detected	Good	Low
11	Joint Compound	None Detected	Good	Low
12	VFC	None Detected	Good	Low
	Mastic	None Detected	Good	Low
13	VFC	None Detected	Good	Low
	Mastic	None Detected	Good	Low
14	VFC	None Detected	Good	Low
	Mastic	None Detected	Good	Low
15	Roofing	None Detected	Good	Low
16	Roofing	None Detected	Good	Low
17	Roofing	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: Approximately 950 square feet of cementitious siding

Friable: N/A

*Asbestos Containing Materials to be removed prior to demolition

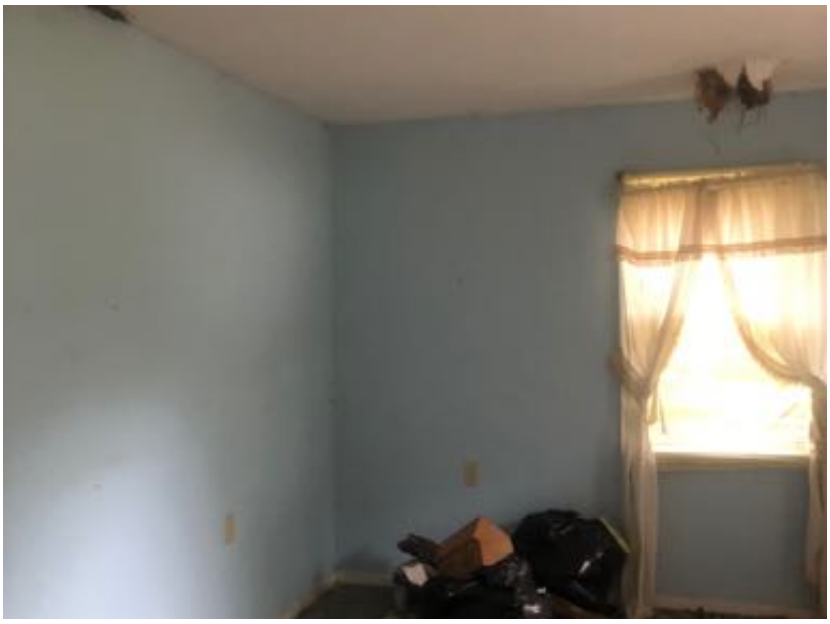
PHOTOGRAPHS

PHOTOGRAPH 1

PHOTOGRAPH 2

PHOTOGRAPH 3

PHOTOGRAPH 4



PHOTOGRAPH 5

PHOTOGRAPH 6

BULK SAMPLE ANALYSIS

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November 6, 2018

ECH Consultants
1823 Trade Street
Florence, SC 29501

CLIENT PROJECT: 125 Adams; Brunson
CEI LAB CODE: A1814288

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

NVLAP TESTING
NVLAP LAB CODE 101768-0

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ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

ECH Consultants

CLIENT PROJECT: 125 Adams; Brunson

LAB CODE: A1814288

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

REPORT DATE: 11/06/18

TOTAL SAMPLES ANALYZED: 15

SAMPLES >1% ASBESTOS:

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 125 Adams; Brunson

LAB CODE: A1814288

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A168036	Off-white,Gold	Ceiling Texture Only	None Detected
2		A168037	Off-white,Gold	Ceiling Texture Only	None Detected
3		A168038	Off-white,Gold	Ceiling Texture Only	None Detected
4		A168039	Off-white,Brown	Sheetrock	None Detected
5		A168040	Off-white,Brown	Sheetrock	None Detected
6		A168041	Off-white,Brown	Sheetrock	None Detected
7		A168042	Off-white,Brown	Sheetrock	None Detected
8		A168043	Off-white,Brown	Sheetrock	None Detected
9		A168044	Off-white,Green	Joint Compound	None Detected
10		A168045	Off-white,Green	Joint Compound	None Detected
11		A168046	Off-white,Green	Joint Compound	None Detected
12		A168047A	Gray,Beige	Vfc	None Detected
		A168047B	Clear,Yellow	Mastic	None Detected
13		A168048A	Gray,Beige	Vfc	None Detected
		A168048B	Clear,Yellow	Mastic	None Detected
14		A168049		Sample Submitted for TEM Analysis	
15		A168050	Black,Gray	Roof	None Detected
16		A168051	Black,Gray	Roof	None Detected
17		A168052		Sample Submitted for TEM Analysis	

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814288
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 125 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
1 A168036	Ceiling Texture Only	Heterogeneous Off-white,Gold Fibrous Loosely Bound	<1%	Cellulose	70% 25% 5%	Calc Carb Vermiculite Paint	None Detected
2 A168037	Ceiling Texture Only	Heterogeneous Off-white,Gold Fibrous Loosely Bound	<1%	Cellulose	70% 25% 5%	Calc Carb Vermiculite Paint	None Detected
3 A168038	Ceiling Texture Only	Heterogeneous Off-white,Gold Fibrous Loosely Bound	<1%	Cellulose	70% 25% 5%	Calc Carb Vermiculite Paint	None Detected
4 A168039	Sheetrock	Heterogeneous Off-white,Brown Fibrous Bound	30%	Cellulose	60% 10%	Gypsum Binder	None Detected
5 A168040	Sheetrock	Heterogeneous Off-white,Brown Fibrous Bound	30%	Cellulose	60% 10%	Gypsum Binder	None Detected
6 A168041	Sheetrock	Heterogeneous Off-white,Brown Fibrous Bound	30%	Cellulose	60% 10%	Gypsum Binder	None Detected
7 A168042	Sheetrock	Heterogeneous Off-white,Brown Fibrous Bound	30%	Cellulose	60% 10%	Gypsum Binder	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814288
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 125 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
8 A168043	Sheetrock	Heterogeneous Off-white,Brown Fibrous Bound	30%	Cellulose	60% 10%	Gypsum Binder	None Detected
9 A168044	Joint Compound	Heterogeneous Off-white,Green Fibrous Bound	<1%	Cellulose	75% 10% 15%	Calc Carb Binder Paint	None Detected
10 A168045	Joint Compound	Heterogeneous Off-white,Green Fibrous Bound	<1%	Cellulose	75% 10% 15%	Calc Carb Binder Paint	None Detected
11 A168046	Joint Compound	Heterogeneous Off-white,Green Fibrous Bound	<1%	Cellulose	75% 10% 15%	Calc Carb Binder Paint	None Detected
12 A168047A	Vfc	Heterogeneous Gray,Beige Fibrous Tightly Bound	<1%	Cellulose	95% 5%	Vinyl Calc Carb	None Detected
A168047B	Mastic	Heterogeneous Clear,Yellow Fibrous Bound	2%	Cellulose	98%	Mastic	None Detected
13 A168048A	Vfc	Heterogeneous Gray,Beige Fibrous Tightly Bound	<1%	Cellulose	95% 5%	Vinyl Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814288
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 125 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
A168048B	Mastic	Heterogeneous Clear,Yellow Fibrous Bound	2%	Cellulose	98%	Mastic	None Detected
14 A168049	Sample Submitted for TEM Analysis						
15 A168050	Roof	Heterogeneous Black,Gray Fibrous Bound	<1% 25%	Cellulose Fiberglass	25% 40% 10%	Tar Gravel Silicates	None Detected
16 A168051	Roof	Heterogeneous Black,Gray Fibrous Bound	<1% 25%	Cellulose Fiberglass	25% 40% 10%	Tar Gravel Silicates	None Detected
17 A168052	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

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.*

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: Scott Minyard

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

NVLAP TESTING
NVLAP LAB CODE 101768-0

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CHAIN OF CUSTODY

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

LAB USE ONLY:
CEI Lab Code: A1814288 (17)
CEI Lab I.D. Range: A168036 - A168052

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1823 Trade Street	Project Name: 125 Adams
	Project ID#: Richard Brunson
Email: enga@echconsultants.com	PO #
Tel: 803.807.0408 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 600	☐	☐	☑	☐	☐	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 436		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR (PCME)	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-15	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2010)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09 (2014)	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-16			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
TEM QUALITTATIVE	IN-HOUSE METHOD		☐	☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

REMARKS / SPECIAL INSTRUCTIONS:
Stop Positives; Combine Samples to make weight for TEM if needed

JH ☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Enga Hair	11/3/18 9:15 am	JH	11/5 8:40

Samples will be disposed of 30 days after analysis

A184288

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SAMPLING FORM

CEI

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: 125 Adams	
Project ID #: [redacted] Brunson	Tel: 803 807 6488

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	ceiling texture only		PLM ☒	TEM ☐
2	ceiling texture only		PLM ☒	TEM ☐
3	ceiling texture only		PLM ☒	TEM ☐
4	Sheetrock		PLM ☒	TEM ☐
5	Sheetrock		PLM ☒	TEM ☐
6	Sheetrock		PLM ☒	TEM ☐
7	Sheetrock		PLM ☒	TEM ☐
8	Sheetrock		PLM ☒	TEM ☐
9	joint compound		PLM ☒	TEM ☐
10	joint compound		PLM ☒	TEM ☐
11	joint compound		PLM ☒	TEM ☐
12	VFC		PLM ☒	TEM ☐
13	VFC		PLM ☒	TEM ☐
14	VFC		PLM ☐	TEM ☒
15	roof		PLM ☒	TEM ☐
16	roof		PLM ☒	TEM ☐
17	roof		PLM ☐	TEM ☒
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
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			PLM ☐	TEM ☐
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			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐

November 7, 2018

ECH Consultants
1823 Trade Street
Florence, SC 29501

CLIENT PROJECT: 125 Adams; Brunson
LAB CODE: T182613

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

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ASBESTOS ANALYTICAL REPORT
By: Transmission Electron Microscopy

Prepared for

ECH Consultants

CLIENT PROJECT: 125 Adams; Brunson

LAB CODE: T182613

TEST METHOD: Bulk Chatfield
EPA 600 / R93 / 116

REPORT DATE: 11/07/18

ASBESTOS BULK ANALYSIS

By: TRANSMISSION ELECTRON MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Project: 125 Adams; Brunson

Lab Code: T182613
Date Received: 11-06-18
Date Analyzed: 11-07-18
Date Reported: 11-07-18

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 %
14 T87097	Gray, Beige Vfc	0.626	24.9	31	44.1	**None Detected**
14 T87098	Clear, Yellow Mastic	0.092	82.6	14.1	3.3	**None Detected**
17 T87099	Black, Gray Roof	0.563	37.5	48.7	13.8	**None Detected**

LEGEND: None

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

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

REGULATORY LIMIT: >1% by weight

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. *Estimated measurement of uncertainty is available on request.* Samples were received in acceptable condition unless otherwise noted.

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

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CHAIN OF CUSTODY

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

LAB USE ONLY:	
CEI Lab Code:	A1814288 (17)
CEI Lab I.D. Range:	A168036 - A168052

COMPANY INFORMATION		PROJECT INFORMATION	
CEI CLIENT #:		Job Contact:	Enga Hair
Company: ECH Consultants		Email / Tel:	enga@echconsultants.com
Address: 1923 Trade Street		Project Name:	125 Adams
		Project ID#:	Clarence Brunson
Email:	enga@echconsultants.com	PO #:	
Tel: 803.807.6468	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 600	☐	☐	☑	☐	☐	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w/ POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR (PCME)	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-18	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2013)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D6758-05 (2014)	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-16			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
TEM QUALITATIVE	IN-HOUSE METHOD		☐	☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

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
	11/3/18 9:15 am		11/5 8:40
	11-5-18 / 14:30 Am		

Samples will be disposed of 30 days after analysis

A1814288

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: 125 Adams	
Project ID #: 68 Brunson	Tel: 803 807 6488

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	ceiling texture only		PLM ☒	TEM ☐
2	ceiling texture only		PLM ☒	TEM ☐
3	ceiling texture only		PLM ☒	TEM ☐
4	Sheetrock		PLM ☒	TEM ☐
5	Sheetrock		PLM ☒	TEM ☐
6	Sheetrock		PLM ☒	TEM ☐
7	Sheetrock		PLM ☒	TEM ☐
8	Sheetrock		PLM ☒	TEM ☐
9	joint compound		PLM ☒	TEM ☐
10	joint compound		PLM ☒	TEM ☐
11	joint compound		PLM ☒	TEM ☐
12	VFC		PLM ☒	TEM ☐
13	VFC		PLM ☒	TEM ☐
14	VFC		PLM ☐	TEM ☒
15	roof		PLM ☒	TEM ☐
16	roof		PLM ☒	TEM ☐
17	roof		PLM ☐	TEM ☒
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
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			PLM ☐	TEM ☐
			PLM ☐	TEM ☐
			PLM ☐	TEM ☐

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November 29, 2018

ECH Consultants
1823 Trade Street
Florence, SC 29501

CLIENT PROJECT: 125 Adams, Brunson
CEI LAB CODE: A1815869

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

NVLAP TESTING
NVLAP LAB CODE 101768-0

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ASBESTOS ANALYTICAL REPORT
By: Polarized Light Microscopy

Prepared for

ECH Consultants

CLIENT PROJECT: 125 Adams, Brunson

LAB CODE: A1815869

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: 125 Adams, Brunson

LAB CODE: A1815869

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A193580	White	Joint Compound	None Detected
2		A193581	White	Joint Compound	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1815869
Date Received: 11-28-18
Date Analyzed: 11-29-18
Date Reported: 11-29-18

Project: 125 Adams, Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID / Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
1 A193580	Joint Compound	Heterogeneous White Fibrous Loosely Bound	2%	Cellulose	70% 20% 8%	Calc Carb Binder Paint	None Detected
2 A193581	Joint Compound	Heterogeneous White Fibrous Loosely Bound	2%	Cellulose	70% 20% 8%	Calc Carb Binder Paint	None Detected

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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

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.*

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
Sarah Talley

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

NVLAP TESTING
NVLAP LAB CODE 101768-0

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CHAIN OF CUSTODY

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

LAB USE ONLY:
CEI Lab Code: A1815869②
CEI Lab I.D. Range: A193580 A193581

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: - Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1823 Trade Street	Project Name: 125 Adams
	Project ID#: Brunson
Email: enga@echconsultants.com	PO #:
Tel: 800.807.6468 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
PLM BULK	EPA 600	☐	☐	☑	☐	☐	☐
PLM POINT COUNT (400)	EPA 600	☐	☐	☐	☐	☐	☐
PLM POINT COUNT (1000)	EPA 600	☐	☐	☐	☐	☐	☐
PLM GRAV w POINT COUNT	EPA 600		☐	☐	☐	☐	☐
PLM BULK	CARB 435		☐	☐	☐	☐	☐
PCM AIR	NIOSH 7400	☐	☐	☐	☐	☐	☐
TEM AIR	EPA AHERA	☐	☐	☐	☐	☐	☐
TEM AIR	NIOSH 7402	☐	☐	☐	☐	☐	☐
TEM AIR (PCME)	ISO 10312	☐	☐	☐	☐	☐	☐
TEM AIR	ASTM 6281-18	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D5480-05 (2010)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-09 (2014)	☐	☐	☐	☐	☐	☐
TEM SOIL	ASTM D7521-16			☐	☐	☐	☐
TEM VERMICULITE	CINCINNATI METHOD			☐	☐	☐	☐
TEM QUALITATIVE	IN-HOUSE METHOD		☐	☐	☐	☐	☐
OTHER:		☐	☐	☐	☐	☐	☐

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
Enga Hair	11/26/18 05:12		11/28 10:20

Samples will be disposed of 30 days after analysis

A1815869

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: 125 Adams	
Project ID #: Brum Sun	Tel:

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	Joint Compound		PLM [x]	TEM [ ]
2	Joint Compound		PLM [x]	TEM [ ]
			PLM [ ]	TEM [ ]
			PLM [ ]	TEM [ ]
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