Asbestos Inspection Report

CDBG #4-CE-17-002

80 Adams Street

Brunson, South Carolina

Prepared for: Town of Brunson

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

Project Number:18-217-1

November 7, 2018

REVISED November 29, 2018

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SCDHEC INSPECTOR LICENSE	

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

Approximately 800 square feet
Approximately 180 square feet of Drop Ceiling Tile in Living Room and Bathroom
Approximately 144 square feet of Ceiling Texture in bedroom
Approximately 380 square feet of VFC #1 throughout hallway, kitchen and bedroom
Approximately 40 square feet of VFC #2 throughout bathroom
Wood paneling walls throughout
Approximately 1,500 square feet of Sheetrock and Joint Compound on walls throughout bedrooms, portion of bathroom, and kitchen, and bedroom ceiling
Fiberglass insulation
Approximately 950 square feet of Shingles

* **All Quantities Above are approximate**

ASBESTOS FINDINGS

The following Table details the twenty-three (23) Bulk Samples taken

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	Joint Compound	None Detected	Good	Low
7	Joint Compound	None Detected	Good	Low
8	Joint Compound	None Detected	Good	Low
9	Ceiling Tile	None Detected	Good	Low
10	Ceiling Tile	None Detected	Good	Low
11	Ceiling Tile	None Detected	Good	Low
12	VFC #1	POSITIVE	Good	High
13	VFC #1	POSITIVE	Good	High
14	VFC #1	POSITIVE	Good	High
15	VFC #2	POSITIVE	Good	High
16	VFC #2	POSITIVE	Good	High
17	VFC #2	POSITIVE	Good	High
18	Ceiling Texture	None Detected	Good	Low
19	Ceiling Texture	None Detected	Good	Low
20	Ceiling Texture	None Detected	Good	Low
21	Shingle	None Detected	Good	Low
22	Shingle	None Detected	Good	Low
23	Shingle	None Detected	Good	Low

Please refer to the enclosed Asbestos Analysis for additional information

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

CONCLUSIONS

The following represents areas that are POSITIVE for Asbestos:

Non-Friable: N/A

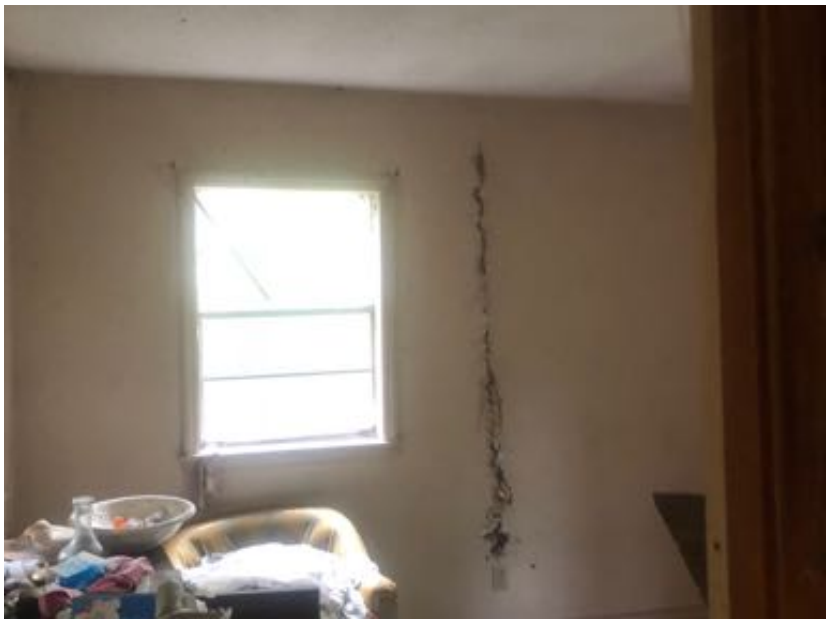
Friable: Approximately 380 square feet of VFC #1 throughout hallway, kitchen and bedroom
Approximately 40 square feet of VFC #2 throughout bathroom

*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: 80 Adams; Brunson
CEI LAB CODE: A1814304

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: 80 Adams; Brunson

LAB CODE: A1814304

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

REPORT DATE: 11/06/18

TOTAL SAMPLES ANALYZED: 18

SAMPLES >1% ASBESTOS: 2

Asbestos Report Summary

By: POLARIZING LIGHT MICROSCOPY

PROJECT: 80 Adams; Brunson

LAB CODE: A1814304

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A168154	White	Sheetrock	None Detected
2		A168155	White	Sheetrock	None Detected
3		A168156	White	Sheetrock	None Detected
4		A168157	White	Sheetrock	None Detected
5		A168158	White	Sheetrock	None Detected
6		A168159	White	Joint Compound	None Detected
7		A168160	White	Joint Compound	None Detected
8		A168161	White	Joint Compound	None Detected
9		A168162	Tan,Brown	Ceiling Tile	None Detected
10		A168163	Tan,Brown	Ceiling Tile	None Detected
11		A168164	Tan,Brown	Ceiling Tile	None Detected
12		A168165	Brown	Vinyl Flooring	**Chrysotile 25%**
13		A168166		Sample Not Analyzed per COC	
14		A168167		Sample Not Analyzed per COC	
15		A168168	Brown	Vinyl Flooring	**Chrysotile 25%**
16		A168169		Sample Not Analyzed per COC	
17		A168170		Sample Not Analyzed per COC	
18		A168171	White	Textured Ceiling	None Detected
19		A168172	White	Textured Ceiling	None Detected
20		A168173	White	Textured Ceiling	None Detected
21		A168174	Black	Shingle	None Detected
22		A168175	Black	Shingle	None Detected
23		A168176		Sample Submitted for TEM Analysis	

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814304
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 80 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
1 A168154	Sheetrock	Homogeneous White Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Gypsum	None Detected
2 A168155	Sheetrock	Homogeneous White Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Gypsum	None Detected
3 A168156	Sheetrock	Homogeneous White Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Gypsum	None Detected
4 A168157	Sheetrock	Homogeneous White Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Gypsum	None Detected
5 A168158	Sheetrock	Homogeneous White Fibrous Bound	5% 5%	Cellulose Fiberglass	90%	Gypsum	None Detected
6 A168159	Joint Compound	Homogeneous White Non-fibrous Bound			60% 40%	Binder Calc Carb	None Detected
7 A168160	Joint Compound	Homogeneous White Non-fibrous Bound			60% 40%	Binder Calc Carb	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814304
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 80 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
8 A168161	Joint Compound	Homogeneous White Non-fibrous Bound			60% 40%	Binder Calc Carb	None Detected
9 A168162	Ceiling Tile	Homogeneous Tan,Brown Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
10 A168163	Ceiling Tile	Homogeneous Tan,Brown Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
11 A168164	Ceiling Tile	Homogeneous Tan,Brown Fibrous Loosely Bound	95%	Cellulose	5%	Paint	None Detected
12 A168165	Vinyl Flooring	Homogeneous Brown Fibrous Bound	25%	Cellulose	50%	Vinyl	**25% Chrysotile**
13 A168166	Sample Not Analyzed per COC						
14 A168167	Sample Not Analyzed per COC						
15 A168168	Vinyl Flooring	Homogeneous Brown Fibrous Bound	25%	Cellulose	50%	Vinyl	**25% Chrysotile**
16 A168169	Sample Not Analyzed per COC						

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1814304
Date Received: 11-05-18
Date Analyzed: 11-06-18
Date Reported: 11-06-18

Project: 80 Adams; Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous		Non-Fibrous		ASBESTOS %
17 A168170	Sample Not Analyzed per COC						
18 A168171	Textured Ceiling	Homogeneous White Non-fibrous Bound			40% 30% 30%	Binder Calc Carb Vermiculite	None Detected
19 A168172	Textured Ceiling	Homogeneous White Non-fibrous Bound			40% 30% 30%	Binder Calc Carb Vermiculite	None Detected
20 A168173	Textured Ceiling	Homogeneous White Non-fibrous Bound			40% 30% 30%	Binder Calc Carb Vermiculite	None Detected
21 A168174	Shingle	Homogeneous Black Fibrous Bound	60%	Cellulose	35% 5%	Tar Gravel	None Detected
22 A168175	Shingle	Homogeneous Black Fibrous Bound	60%	Cellulose	35% 5%	Tar Gravel	None Detected
23 A168176	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: Megan Fisher

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: A1814304 (23)
CEI Lab I.D. Range: A168154 - A168176

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1823 Trade Street	Project Name: Ge Adams
	Project ID#: Brunson
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 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 6281-16	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2010)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D6755-09 (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	☑ Accept Samples ☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
		[signature]	11/5 8:40

Samples will be disposed of 30 days after analysis

A1814304

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: 90 Adams	
Project ID #: Brunson	Tel: 803.807.6488

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	Sheetrock		PLM ☒	TEM ☐
2	Sheetrock		PLM ☒	TEM ☐
3	Sheetrock		PLM ☒	TEM ☐
4	Sheetrock		PLM ☒	TEM ☐
5	Sheetrock		PLM ☒	TEM ☐
6	joint compound		PLM ☒	TEM ☐
7	joint compound		PLM ☒	TEM ☐
8	joint compound		PLM ☒	TEM ☐
9	Ceiling tile		PLM ☒	TEM ☐
10	ceiling tile		PLM ☒	TEM ☐
11	ceiling tile		PLM ☒	TEM ☐
12	VFC #1		PLM ☒	TEM ☐
13	VFC #1		PLM ☒	TEM ☐
14	VFC #1		PLM ☐	TEM ☒
15	VFC #2		PLM ☒	TEM ☐
16	VFC #2		PLM ☒	TEM ☐
17	VFC #2		PLM ☐	TEM ☒
18	Ceiling texture		PLM ☒	TEM ☐
19	Ceiling texture		PLM ☒	TEM ☐
20	Ceiling texture		PLM ☒	TEM ☐
21	Shingle		PLM ☒	TEM ☐
22	Shingle		PLM ☒	TEM ☐
23	Shingle		PLM ☐	TEM ☒
24			PLM ☐	TEM ☐
25			PLM ☐	TEM ☐
26			PLM ☐	TEM ☐
27			PLM ☐	TEM ☐
28			PLM ☐	TEM ☐

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November 7, 2018

ECH Consultants
1823 Trade Street
Florence, SC 29501

CLIENT PROJECT: 80 Adams; Brunson
LAB CODE: T182608

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: 80 Adams; Brunson

LAB CODE: T182608

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: 80 Adams; Brunson

Lab Code: T182608
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 %
23 T87084	Black Shingle	0.552	48.6	4.7	46.7	**None Detected**

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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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T82605
T87084
CEI (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: A1814304 (23)
CEI Lab I.D. Range: A168154-A168176

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1823 Trade Street	Project Name: Be Adams
	Project ID#: Bruson
Email: enga@echconsultants.com	PO #:
Tel: 803.807.6495 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 6281-15	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2013)	☐	☐	☐	☐	☐	☐
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
		[illegible]	11/5 8:40
[illegible]	11/4/16 16:10		

Samples will be disposed of 30 days after analysis

A1814304

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: Sa Adams	
Project ID #: Brunson	Tel: 803.807.6488

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	Sheetrock		PLM ☒	TEM ☐
2	Sheetrock		PLM ☒	TEM ☐
3	Sheetrock		PLM ☒	TEM ☐
4	Sheetrock		PLM ☒	TEM ☐
5	Sheetrock		PLM ☒	TEM ☐
6	joint compound		PLM ☒	TEM ☐
7	joint compound		PLM ☒	TEM ☐
8	joint compound		PLM ☒	TEM ☐
9	Ceiling tile		PLM ☒	TEM ☐
10	ceiling tile		PLM ☒	TEM ☐
11	ceiling tile		PLM ☒	TEM ☐
12	VFC #1		PLM ☒	TEM ☐
13	VFC #1		PLM ☒	TEM ☐
14	VFC #1		PLM ☐	TEM ☒
15	VFC #2		PLM ☒	TEM ☐
16	VFC #2		PLM ☒	TEM ☐
17	VFC #2		PLM ☐	TEM ☒
18	Ceiling texture		PLM ☒	TEM ☐
19	Ceiling texture		PLM ☒	TEM ☐
20	Ceiling texture		PLM ☒	TEM ☐
21	Shingle		PLM ☒	TEM ☐
22	Shingle		PLM ☒	TEM ☐
23	Shingle		PLM ☐	TEM ☒
24			PLM ☐	TEM ☐
25			PLM ☐	TEM ☐
26			PLM ☐	TEM ☐
27			PLM ☐	TEM ☐
28			PLM ☐	TEM ☐

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November 29, 2018

ECH Consultants
1823 Trade Street
Florence, SC 29501

CLIENT PROJECT: 80 Adams, Brunson
CEI LAB CODE: A1815868

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: 80 Adams, Brunson

LAB CODE: A1815868

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: 80 Adams, Brunson

LAB CODE: A1815868

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

Client ID	Layer	Lab ID	Color	Sample Description	ASBESTOS %
1		A193578	White	Joint Compound	None Detected
2		A193579	White	Joint Compound	None Detected

ASBESTOS BULK ANALYSIS

By: POLARIZING LIGHT MICROSCOPY

Client: ECH Consultants
1823 Trade Street
Florence, SC 29501

Lab Code: A1815868
Date Received: 11-28-18
Date Analyzed: 11-29-18
Date Reported: 11-29-18

Project: 80 Adams, Brunson

ASBESTOS BULK PLM, EPA 600 METHOD

Client ID Lab ID	Lab Description	Lab Attributes	NON-ASBESTOS COMPONENTS Fibrous	Non-Fibrous		ASBESTOS %
1 A193578	Joint Compound	Homogeneous White Non-fibrous Bound		60% 40% <1%	Binder Calc Carb Paint	None Detected
2 A193579	Joint Compound	Homogeneous White Non-fibrous Bound		60% 40% <1%	Binder Calc Carb 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: Megan Fisher

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: A1815868 (2)
CEI Lab I.D. Range: A193578-A193579

COMPANY INFORMATION	PROJECT INFORMATION
CEI CLIENT #:	Job Contact: Enga Hair
Company: ECH Consultants	Email / Tel: enga@echconsultants.com
Address: 1823 Trade Street	Project Name: SD Adams
	Project ID#: Brunson
Email: enga@echconsultants.com	PO #:
Tel: 803.807.6488 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 6281-15	☐	☐	☐	☐	☐	☐
TEM BULK	CHATFIELD		☐	☑	☐	☐	☐
TEM DUST WIPE	ASTM D6480-05 (2013)	☐	☐	☐	☐	☐	☐
TEM DUST MICROVAC	ASTM D5755-99 (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

☑ Accept Samples
☐ Reject Samples

Relinquished By:	Date/Time	Received By:	Date/Time
Enga Hair	11/2/18 09:00	[signature]	11/2/18 10:30pm

Samples will be disposed of 30 days after analysis

A1815868

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SAMPLING FORM

COMPANY CONTACT INFORMATION	
Company: ECH Consultants	Job Contact: Enga Hair
Project Name: 80 Adams	
Project ID #: Brunson	Tel:

SAMPLE ID#	DESCRIPTION / LOCATION	VOLUME/ AREA	TEST	
1	Joint Compound		PLM ☒	TEM ☐
2	Joint Compound		PLM ☒	TEM ☐
			PLM ☐	TEM ☐
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			PLM ☐	TEM ☐

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SCDHEC INSPECTOR LICENSE

SCDHEC ISSUED
Asbestos ID Card

Enga Hair

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