April 17, 2019

Asbestos Survey
For

1006 California Drive, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19007**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

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1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 1006 California Drive in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the vacant residence.

The subject structure is an approximately 1,567 ft^2 single-family residence built over a crawlspace. The roof is built in a gable configuration and is covered with 3-tab composition shingles. The exterior is clad primarily with brick veneer. Interior finishes include:

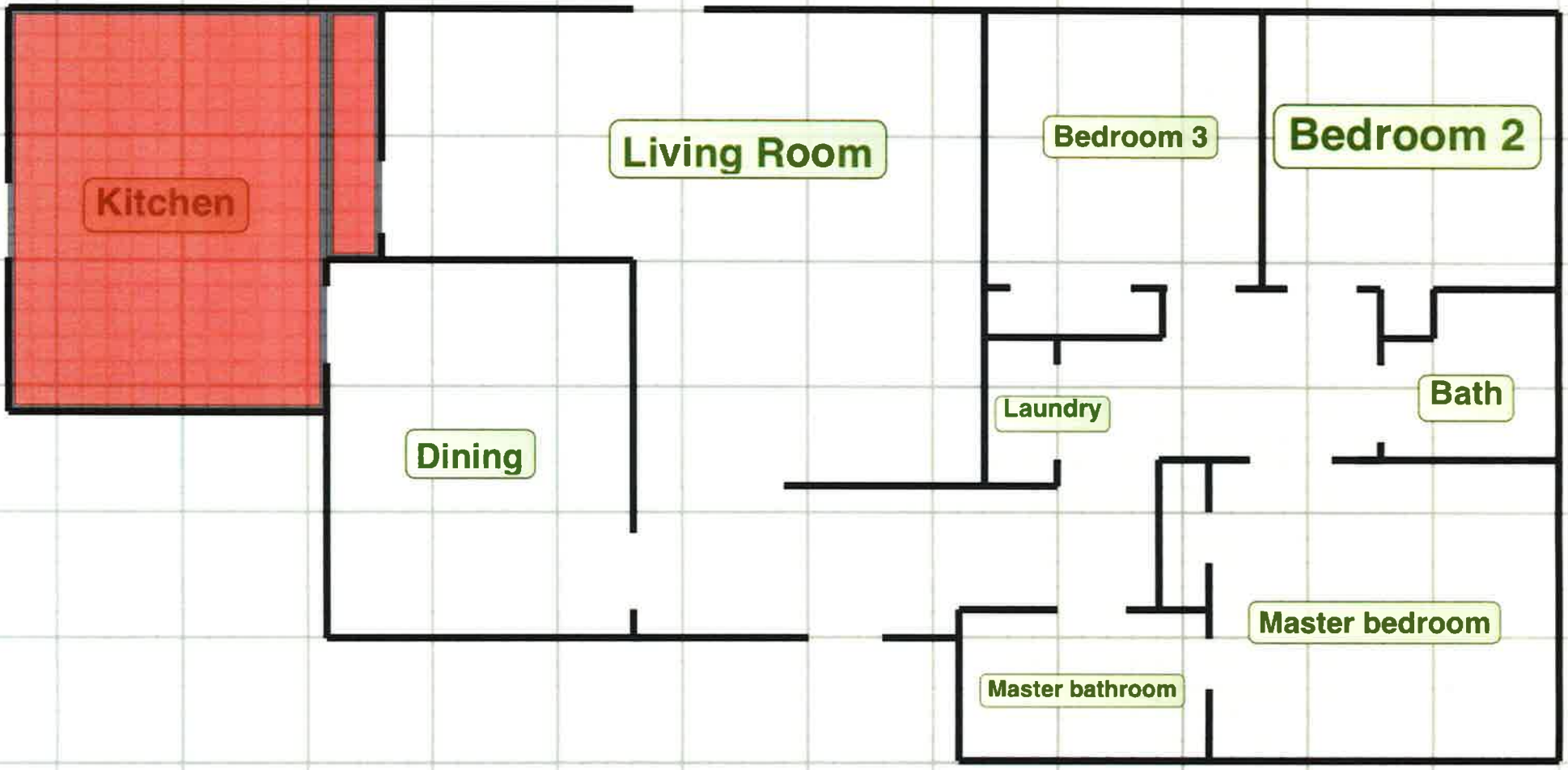
Ceilings/Walls: Sheetrock throughout.
Floors: Combination of ceramic tile, wood floors and vinyl.

Fourteen (14) suspect materials were identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to EMSL Analytical, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, those materials containing asbestos > 1 % include approximately 240 ft^2 of kitchen flooring.

Limitations

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

DRAWINGS



Asbestos Containing Flooring

SITE MAP

TABLES

Table #1
Asbestos Containing Building Material (ACBM)

Project Name: **1006 California Drive**
Project Address: 1006 California Dr., Columbia, SC **Date:** 17-Apr-19

* Assumed to Contain Asbestos > 1%

Observed ACBM		
Material	EPA AHERA Category	Quantity
Kitchen Flooring	Miscellaneous	240 ft^2

Table #2
Non-Friable ACBM

Project Name: **1006 California Drive**
Project Address: 1006 California Dr., Columbia, SC **Date:** 17-Apr-19

* Assumed to Contain Asbestos > 1%

Non-Friable ACBM	
Material	Quantity
Kitchen Flooring	240 ft^2

Table #3

Asbestos - Suspect Material Data Sheet

Project Name: **1006 California Drive**

Project Address: 1006 California Dr., Columbia, SC **Date:** 17-Apr-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Plaster: Skim Coat	S	5	4,866 ft^2	F/G	PD	N			NA
HM-02	Plaster: Rough Coat	S	5	4,866 ft^2	F/G	PD	N			NA
HM-03	Sheetrock	M	3	1,260 ft^2	F/G	PD	N			NA
HM-04	Joint Compound	S	5	1,260 ft^2	F/G	PD	N			NA
HM-05	Tape	M	5		F/G	PD	N			NA
HM-06	Ceramic Tile Thinset	M	3	108 ft^2	F/G	PD	N			NA
HM-07	Kitchen Flooring	M	3	240 ft^2	NF/G	PD	P			2
HM-08	Floor Tile in Laundry (Self-Stick Tile)	M	3	18 ft^2	NF/G	PD	N	N		NA
HM-09	Floor Tile in Laundry (Leveler)	M	3	18 ft^2	NF/G	LPD	N			NA

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Asbestos - Suspect Material Data Sheet

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Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

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M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-10	Felt Paper Under Hardwood Floors	M	3	1,267 ft^2	NF/G	LPD	N	N		NA
HM-11	Roof Shingles	M	3	2,350 ft^2	NF/G	PD	N	N		NA
HM-12	Felt Paper below HM-11	M	3	2,350 ft^2	NF/G	LPD	N	N		NA
HM-13	Chimney Flashing	M	3	12 LF	NF/G	PD	N	N		NA
HM-14	Exterior Caulk	M	3	20 windows; 3 doors	NF/G	LPD	N	N		NA

Table #4
Asbestos - Bulk Sample Data Sheet

Project Name: **1006 California Drive**
Project Address: 1006 California Dr., Columbia, SC **Date:** 17-Apr-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM
Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM
Assumed to contain Asbestos > 1%

* **Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021902362-0001	1006-01	HM-01	Plaster: Skim Coat	Living Room		NAD		
021902362-0002	1006-02			Bedroom 3		NAD		
021902362-0003	1006-03			Bedroom 2		NAD		
021902362-0004	1006-04			Master Bedroom		NAD		
021902362-0005	1006-05			Hallway		NAD		
021902362-0001A	1006-01	HM-02	Plaster: Rough Coat	Living Room		NAD		
021902362-0002A	1006-02			Bedroom 3		NAD		
021902362-0003A	1006-03			Bedroom 2		NAD		
021902362-0004A	1006-04			Master Bedroom		NAD		
021902362-0005A	1006-05			Hallway		NAD		
021902362-0006	1006-06	HM-03	Sheetrock	Dining Room		NAD		
021902362-0007	1006-07			Living Room		NAD		
021902362-0008	1006-08			Hallway		NAD		
021902362-0006A	1006-06	HM-04	Joint Compound	Dining Room		NAD		
021902362-0007A	1006-07			Living Room		NAD		
021902362-0008A	1006-08			Hallway		NAD		
021902362-0009	1006-09			Laundry Room		NAD		
021902362-0010	1006-10			Kitchen		NAD		
021902362-0006B	1006-06	HM-05	Tape	Dining Room		NAD		
021902362-0007B	1006-07			Living Room		NAD		
021902362-0008B	1006-08			Hallway		NAD		
021902362-0009A	1006-09			Laundry Room		NAD		
021902362-0010A	1006-10			Kitchen		NAD		

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile
Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4
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Assumed to contain Asbestos > 1%

* **Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021902362-0011	1006-11	HM-06	Ceramic Tile Thinset	Master Bathroom		NAD		
021902362-0012	1006-12			Bathroom		NAD		
021902362-0013	1006-13			Bathroom		NAD		
021902362-0014	1006-14	HM-07	Kitchen Flooring	Kitchen	Chry	30%		
021902362-0015	1006-15					DNA		
021902362-0016	1006-16					DNA		
021902362-0017	1006-17	HM-08	Floor Tile in Laundry (Self-Stick Tile)	Laundry Room		NAD		
021902362-0018	1006-18					NAD		
021902362-0029	1006-19						NAD	
021902362-0017A	1006-17	HM-09	Floor Tile in Laundry (Leveler)	Laundry Room		NAD		
021902362-0018A	1006-18					NAD		
021902362-0018B	1006-19					NAD		
021902362-0019	1006-20	HM-10	Felt Paper Under Hardwood Floors	Hallway		NAD		
021902362-0020	1006-21			Living Room		NAD		
021902362-0030	1006-22			Master Bedroom			NAD	
021902362-0021	1006-23	HM-11	Shingles	Roof		NAD		
021902362-0022	1006-24					NAD		
021902362-0031	1006-25						NAD	
021902362-0023	1006-26	HM-12	Felt Paper below HM-11	Roof		NAD		
021902362-0024	1006-27					NAD		
021902362-0032	1006-28						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile
Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4

Asbestos - Bulk Sample Data Sheet

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Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021902362-0025	1006-29	HM-13	Chimney Flashing			NAD		
021902362-0026	1006-30					NAD		
021902362-0033	1006-31						NAD	
021902362-0027	1006-32	HM-14	Exterior Caulk			NAD		
021902362-0028	1006-33					NAD		
021902362-0034	1006-34						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

LABORATORY RESULTS

EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021902362
Customer ID: ESE52
Customer PO:
Project ID:

Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1006 California

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 04/11/2019 9:15 AM
Analysis Date: 04/11/2019
Collected Date: 04/10/2019

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1006-01-Skim Coat *021902362-0001*	Plaster	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1006-01-Rough Coat *021902362-0001A*	Plaster	Gray/Tan Non-Fibrous Heterogeneous		60% Quartz 40% Non-fibrous (Other)	None Detected
1006-02-Skim Coat *021902362-0002*	Plaster	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1006-02-Rough Coat *021902362-0002A*	Plaster	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	None Detected
1006-03-Skim Coat *021902362-0003*	Plaster	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1006-03-Rough Coat *021902362-0003A*	Plaster	Gray/Tan Non-Fibrous Heterogeneous		40% Quartz 60% Non-fibrous (Other)	None Detected
1006-04-Skim Coat *021902362-0004*	Plaster	White/Beige Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1006-04-Rough Coat *021902362-0004A*	Plaster	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	None Detected
1006-05-Skim Coat *021902362-0005*	Plaster	White Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1006-05-Rough Coat *021902362-0005A*	Plaster	Gray/Tan Non-Fibrous Homogeneous	1% Cellulose	40% Quartz 59% Non-fibrous (Other)	None Detected
1006-06-Sheetrock *021902362-0006*	Sheetrock/Joint Compound	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
1006-06-Joint Compound *021902362-0006A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
1006-06-Tape *021902362-0006B*	Sheetrock/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1006-07-Sheetrock *021902362-0007*	Sheetrock/Joint Compound	Brown/Gray Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
1006-07-Joint Compound *021902362-0007A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected

Initial report from: 04/12/2019 08:32:45

EMSL Analytical, Inc.
706 Gralin Street Kernersville, NC 27284
Tel/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021902362
Customer ID: ESE52
Customer PO:
Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1006-07-Tape *021902362-0007B*	Sheetrock/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1006-08-Sheetrock *021902362-0008*	Sheetrock/Joint Compound	Gray Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
1006-08-Joint Compound *021902362-0008A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1006-08-Tape *021902362-0008B*	Sheetrock/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1006-09-Joint Compound *021902362-0009* *No Sheetrock Present.*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
1006-09-Tape *021902362-0009A*	Sheetrock/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1006-10-Joint Compound *021902362-0010* *No Sheetrock Present.*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
1006-10-Tape *021902362-0010A*	Sheetrock/Joint Compound	Beige Fibrous Homogeneous	100% Cellulose		None Detected
1006-11 *021902362-0011*	Ceramic Tile Thinset	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose	20% Quartz <1% Mica 80% Non-fibrous (Other)	None Detected
1006-12 *021902362-0012*	Ceramic Tile Thinset	Gray/Tan Non-Fibrous Heterogeneous	<1% Cellulose	20% Quartz <1% Mica 80% Non-fibrous (Other)	None Detected
1006-13 *021902362-0013*	Ceramic Tile Thinset	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	20% Quartz <1% Mica 80% Non-fibrous (Other)	None Detected
1006-14-Tan Flooring *021902362-0014*	Kitchen Flooring	Gray/Tan/Beige Fibrous Heterogeneous	1% Cellulose	69% Non-fibrous (Other)	30% Chrysotile
1006-14-Additional Flooring Layers *021902362-0014A*	Kitchen Flooring				Positive Stop (Not Analyzed)
1006-15 *021902362-0015*	Kitchen Flooring				Positive Stop (Not Analyzed)
1006-16 *021902362-0016*	Kitchen Flooring				Positive Stop (Not Analyzed)
1006-17-Self-Stick Tile *021902362-0017*	Floor Tile in Laundry	Gray/Tan/Beige Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
1006-17-Leveler *021902362-0017A*	Floor Tile in Laundry	Gray/Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose	3% Quartz 20% Ca Carbonate 77% Non-fibrous (Other)	None Detected

Initial report from: 04/12/2019 08:32:45

EMSL Analytical, Inc.
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Customer ID: ESE52
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Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1006 California

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 04/11/2019 9:15 AM
Analysis Date: 04/16/2019
Collected Date: 04/10/2019

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
1006-19-Self Stick Tile *021902362-0029*	Floor Tile in Laundry	Tan Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1006-22 *021902362-0030*	Felt Paper Under Hardwood Floors	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1006-25 *021902362-0031*	Roof Shingles	Gray/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
1006-28 *021902362-0032*	Felt Paper Under Shingles	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1006-31 *021902362-0033*	Chimney Flashing	Black Fibrous Heterogeneous	99.23 Other Talc fibers present.	0.77 Fibrous_Other	No Asbestos Detected
1006-34 *021902362-0034*	Exterior Caulk	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)
Stephen Bennett (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 04/16/2019 17:18:48

EMSL Analytical, Inc.
706 Gralin Street Kernersville, NC 27284
Tel/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021902362
Customer ID: ESE52
Customer PO:
Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1006-18-Self-Stick Tile *021902362-0018*	Floor Tile in Laundry	Brown/Gray/Tan Non-Fibrous Homogeneous		30% Quartz 70% Non-fibrous (Other)	None Detected
1006-18-Leveler *021902362-0018A*	Floor Tile in Laundry	Gray/Tan/Beige Non-Fibrous Homogeneous	1% Cellulose	5% Quartz 20% Ca Carbonate 74% Non-fibrous (Other)	None Detected
1006-19-Leveler *021902362-0018B* *Non-NOB Material in NOB Sample.*	Floor Tile in Laundry	Gray/Tan/Beige Non-Fibrous Heterogeneous	<1% Cellulose	3% Quartz 20% Ca Carbonate 77% Non-fibrous (Other)	None Detected
1006-20 *021902362-0019*	Felt Paper Under Hardwood Floors	Black Fibrous Homogeneous	70% Cellulose <1% Synthetic	30% Non-fibrous (Other)	None Detected
1006-21 *021902362-0020*	Felt Paper Under Hardwood Floors	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected
1006-23 *021902362-0021*	Roof Shingles	White/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
1006-24 *021902362-0022*	Roof Shingles	Gray/White/Black Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
1006-26 *021902362-0023*	Felt Paper Under Shingles	Black Fibrous Homogeneous	70% Cellulose <1% Synthetic	30% Non-fibrous (Other)	None Detected
1006-27 *021902362-0024*	Felt Paper Under Shingles	Black Fibrous Homogeneous	70% Cellulose <1% Synthetic	30% Non-fibrous (Other)	None Detected
1006-29 *021902362-0025*	Chimney Flashing	Black Non-Fibrous Homogeneous	<1% Cellulose 1% Fibrous (Other)	99% Non-fibrous (Other)	None Detected
1006-30 *021902362-0026*	Chimney Flashing	Black Non-Fibrous Homogeneous	<1% Cellulose 1% Fibrous (Other)	99% Non-fibrous (Other)	None Detected
1006-32 *021902362-0027*	Exterior Caulk	Gray/White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1006-33 *021902362-0028*	Exterior Caulk	Gray/White Non-Fibrous Homogeneous	<1% Cellulose	5% Ca Carbonate 95% Non-fibrous (Other)	None Detected

Analyst(s)
Nicole Shutts (13)
Scott Combs (29)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, 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. All samples received in acceptable condition unless otherwise noted. 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. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

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

Initial report from: 04/12/2019 08:32:45

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 2362

PHONE:
FAX:

Company Name : ABS Environmental, Inc.		**EMSL Customer ID:**	
Street: 1416 Chapin Road		**City:** Chapin	**State/Province:** SC
Zip/Postal Code: 29036	**Country:** USA	**Telephone #:** 803-345-3833	**Fax #:** 803-345-2823
Report To (Name): Jeff Rivers		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: jrivers@absenv.com		**Purchase Order:**	
Project Name/Number: 1006 California		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: SC		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

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

Turnaround Time (TAT) Options* – Please Check

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

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

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ 4-4.5hr TAT (AHERA only)
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☑ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name:

Samplers Signature: [signature]

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1006/01-05	Plaster		
1005/06-10	Sheetrock/Joint Compound		
1006/11-13	Ceramic Tile Thinset		
1006/14-16	Kitchen flooring		
1006/17-19	Floor tile in laundry	TEM NOB	

Client Sample # (s): 1006-01 - 1006-34 **Total # of Samples:** 34 = 28

Relinquished (Client): [signature] **Date:** 4/10/19 **Time:** 1730

Received (Lab): [signature] **Date:** 4/11/19 **Time:** 9:15

Comments/Special Instructions:
For samples 14-16, please do positive stop if any Layer tests positive.

① EMX

Controlled Document – Asbestos COC – R10 – 05/09/2016

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 2362

PHONE:
FAX:

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1006/20-22	Felt Paper under Hardwood Floors	TEM NOB	If Negative
1006/23-25	Roof Shingles	TEM NOB	If Negative
1006/26-28	Felt Paper under Shingles	TEM NOB	If Negative
1006/29-31	Chimney Flashing	TEM NOB	If Negative
1006/32-34	Exterior caulk	TEM NOB	If Negative

***Comments/Special Instructions:**

Page _____ of _____ pages

July 17, 2019

Asbestos Survey
For

1010 California Drive, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19008A**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

2.0 APPENDIX

- **A. Drawing**
- **B. Site Map**
- **C. Tables**
- **D. Laboratory Results**

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 1010 California Drive in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the vacant residence.

The subject structure is an approximately 1,927 ft^2 single-family residence built over a crawlspace. The roof is built in a gable configuration and is covered with 3-tab composition shingles. The exterior is clad primarily with brick veneer. Interior finishes include:

Ceilings: Combination of lay-in tiles, spray applied texture on sheetrock, and plaster.
Walls: Combination of sheetrock and plaster.
Floors: Combination of ceramic tile, wood floors and vinyl.

Twenty-nine (29) suspect materials were identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to EMSL Analytical, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, those materials containing asbestos > 1 % include approximately:

- 554 ft^2 of backing below the 18" tan floor tile in the Den[1].
- 204 ft^2 of sheet vinyl, mastic, and backing in the Kitchen[2].
- Window Glazing on 26 exterior windows.
- 12 LF of Chimney Flashing.

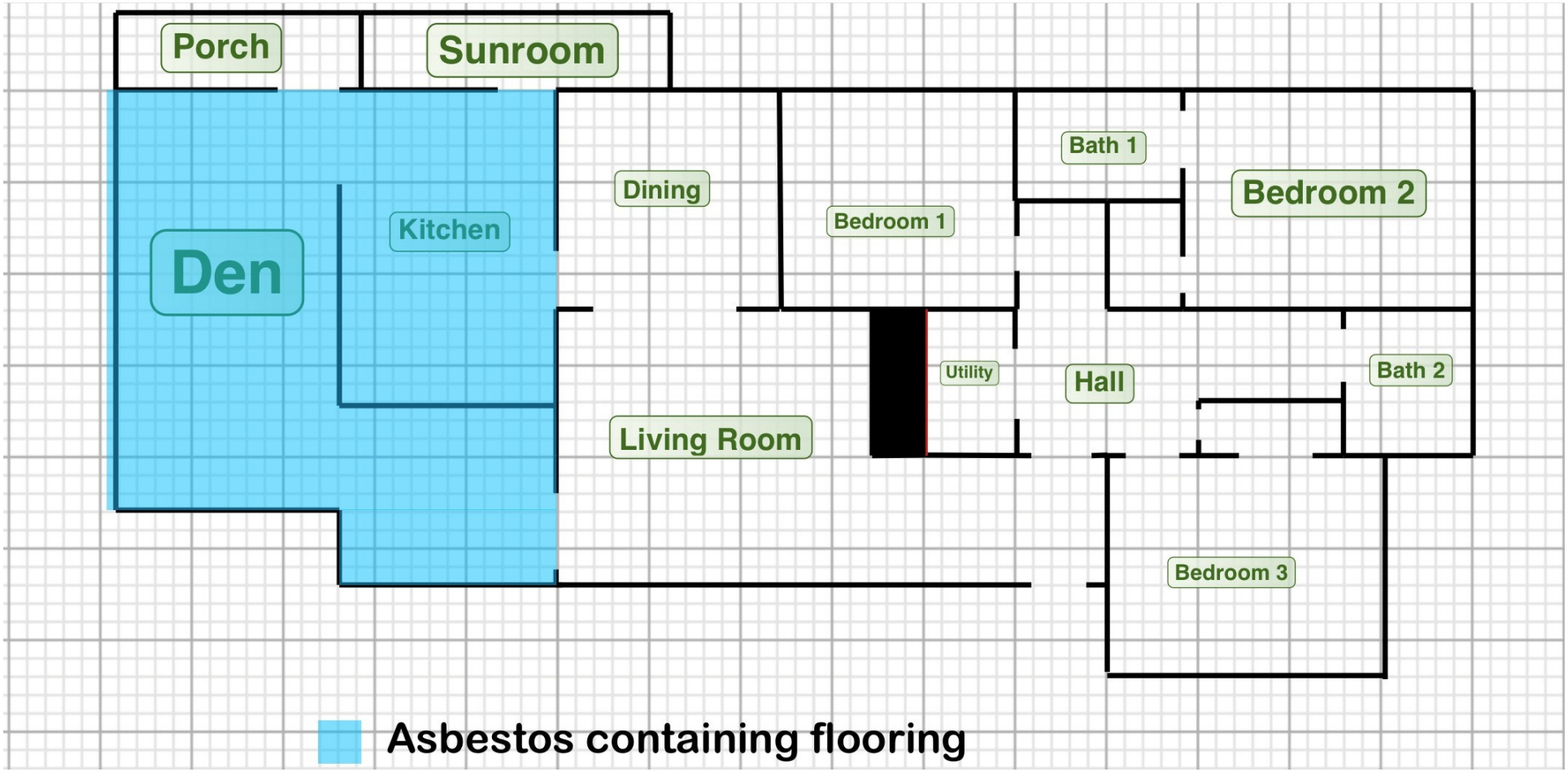
[1] The 18" tan floor tile and mastic are assumed to contain asbestos > 1%.
[2] There are multiple layers of flooring, mastic, and backing in the Kitchen. All layers contain or are assumed to contain asbestos > 1%.

<u>Limitations</u>

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth

herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

DRAWING


Porch
Sunroom
Den
Kitchen
Dining
Bedroom 1
Bath 1
Bedroom 2
Utility
Hall
Bath 2
Living Room
Bedroom 3
Asbestos containing flooring

SITE MAP

TABLES

Table #1
Asbestos Containing Building Material (ACBM)

Project Name: **1010 California Drive**
Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

* Assumed to Contain Asbestos > 1%

Observed ACBM		
Material	EPA AHERA Category	Quantity
Backing below the 18" tan floor tile in the Den[1]	Miscellaneous	554 ft^2
Sheet vinyl, mastic, and backing in the Kitchen[2]	Miscellaneous	204 ft^2
Exterior Window Glazing	Miscellaneous	26 windows
Chimney Flashing	Miscellaneous	12 LF

[1] The 18" tan floor tile and mastic are assumed to contain asbestos > 1%.
[2] There are multiple layers of flooring, mastic, and backing in the Kitchen. All layers contain or are assumed to contain asbestos > 1%.

Table #2
Non-Friable ACBM

Project Name: **1010 California Drive**
Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

* Assumed to Contain Asbestos > 1%

Non-Friable ACBM	
Material	Quantity
Backing below the 18" tan floor tile in the Den[1]	554 ft^2
Sheet vinyl, mastic, and backing in the Kitchen[2]	204 ft^2
Exterior Window Glazing	26 windows
Chimney Flashing	12 LF

[1] The 18" tan floor tile and mastic are assumed to contain asbestos > 1%.

[2] There are multiple layers of flooring, mastic, and backing in the Kitchen. All layers contain or are assumed to contain asbestos > 1%.

Table #3

Asbestos - Suspect Material Data Sheet

Project Name: **1010 California Drive**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

P = Positive via TEM

N = Negative: does not meet definition of ACM

A = Assumed to be ACM; no samples collected

PTP = Previously tested Positive

PTN = Previously tested Negative

Present Condition

F = Friable NF= Non Friable D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage) SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied) M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Ceiling Texture	S	3	758 ft^2	F/G	PD	N			NA
HM-02	Sheetrock	M	3	741 ft^2	F/G	PD	N			NA
HM-03	Joint Compound	S	3	741 ft^2	F/G	PD	N			NA
HM-04	Cove Base Mastic	M	3	42 LF	NF/G	LPD	N	N		NA
HM-05	18" Tan Floor Tile	M	3	758 ft^2	NF/G	PD	A			NA
HM-06	Backing below HM-05	M	3	758 ft^2	NF/G	LPD	P			1
HM-07	Mastic below HM-06	M	3	758 ft^2	NF/G	LPD	A			NA
HM-08	1' x 1' Ceiling Tile	M	3	238 ft^2	F/G	PD	N			NA
HM-09	Mastic below HM-08	M	3	238 ft^2	NF/G	LPD	N	N		NA
HM-10	Ceiling Texture	S	5	1,927 ft^2	F/G	PD	N			NA
HM-11	Plaster	S	5	4,818 ft^2	F/G	PD	N			NA

Table #3

Asbestos - Suspect Material Data Sheet

Project Name: **1010 California Drive**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

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Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-12	Sheetrock	M	5	4,818 ft^2	F/G	PD	N			NA
HM-13	Sheetrock	M	5	4,818 ft^2	F/G	PD	N			NA
HM-14	Joint Compound	S	5	4,818 ft^2	F/G	PD	N			NA
HM-15	Thinset under Ceramic Tile	M	3	110 ft^2	F/G	PD	N			NA
HM-16	Kitchen Sheet Vinyl (Black Flooring)	M	3	204 ft^2	NF/G	PD	A			NA
HM-17	Mastic below HM-16	M	3	204 ft^2	NF/G	LPD	A			NA
HM-18	Kitchen Sheet Vinyl (Flooring 2)	M	3	204 ft^2	NF/G	LPD	P			2
HM-19	Mastic below HM-18	M	3	204 ft^2	NF/G	LPD	A			1
HM-20	Kitchen Sheet Vinyl (Flooring 3)	M	3	204 ft^2	NF/G	LPD	P			1

Table #3

Asbestos - Suspect Material Data Sheet

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M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-21	Mastic below HM-20	M	3	204 ft^2	NF/G	LPD	P			1
HM-22	Kitchen Sheet Vinyl (Bottom Flooring)	M	3	204 ft^2	NF/G	LPD	P			1
HM-23	Mastic below HM-22	M	3	204 ft^2	NF/G	LPD	P			1
HM-24	Roof Shingles	M	3	2,891 ft^2	NF/G	PD	N	N		NA
HM-25	Felt Paper	M	3	2,891 sf	NF/G	LPD	N	N		NA
HM-26	Exterior Caulk	M	3	26 windows 3 doors	NF/G	PD	N	N		NA
HM-27	Exterior Window Glazing	M	3	26 windows	NF/G	PD	P			2
HM-28	Chimney Flashing	M	3	12 LF	NF/G	PD	P			2
HM-29	White Duct Mastic	M	3	326 LF	NF/G	LPD	N	N		NA

Table #4

Asbestos - Bulk Sample Data Sheet

Project Name: **1010 California Drive**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

* **Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904238-0001	1010-01	HM-01	Ceiling Texture	Den		NAD		
021904238-0002	1010-02			Den		NAD		
021904238-0003	1010-03			Den		NAD		
021904238-0004	1010-04	HM-02	Sheetrock	Den		NAD		
021904238-0005	1010-05			Den		NAD		
021904238-0006	1010-06			Den		NAD		
021904238-0004	1010-04	HM-03	Joint Compound	Den		NAD		
021904238-0005	1010-05			Den		NAD		
021904238-0006	1010-06			Den		NAD		
021904238-0007	1010-07	HM-04	Cove Base Mastic	Den		NAD		
021904238-0008	1010-08			Den		NAD		
021904238-0046	1010-09			Den			NAD	
021904238-0009	1010-10	HM-05	18" Tan Floor Tile	Kitchen		NAD		
021904238-0010	1010-11			Kitchen		NAD		
	1010-12			Den		DNA		
021904238-0009A	1010-10	HM-06	Backing below HM-05	Kitchen	Chry	30%		
021904238-0010A	1010-11			Kitchen	Chry	60%		
	1010-12			Den		DNA		
021904238-0009B	1010-10	HM-07	Mastic below HM-06	Kitchen		NAD		
021904238-0010B	1010-11			Kitchen	Chry	< 1%		
021904238-0048	1010-12			Den		DNA		

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4

Asbestos - Bulk Sample Data Sheet

Project Name: **1010 California Drive**

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Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904238-0011	1010-13	HM-08	1' x 1' Ceiling Tile	Sunroom		NAD		
021904238-0012	1010-14			Sunroom		NAD		
021904238-0013	1010-15			Sunroom		NAD		
021904238-0011A	1010-13	HM-09	Mastic below HM-08	Sunroom		NAD		
021904238-0012A	1010-14			Sunroom		NAD		
021904238-0013A	1010-15			Sunroom			NAD	
021904238-0014	1010-16	HM-10	Ceiling Texture	Kitchen		NAD		
021904238-0015	1010-17			Dining		NAD		
021904238-0016	1010-18			Living Room		NAD		
021904238-0017	1010-19			Hallway		NAD		
021904238-0018	1010-20			Utility		NAD		
021904238-0019	1010-21	HM-11	Plaster	Kitchen		NAD		
021904238-0020	1010-22			Dining		NAD		
021904238-0021	1010-23			Living Room		NAD		
021904238-0022	1010-24			Hallway		NAD		
021904238-0023	1010-25			Utility		NAD		
021904238-0019A	1010-21	HM-12	Sheetrock	Kitchen		NAD		
021904238-0020A	1010-22			Dining		NAD		
021904238-0021A	1010-23			Living Room		NAD		
021904238-0022A	1010-24			Hallway		NAD		
021904238-0023A	1010-25			Utility		NAD		

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

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Asbestos - Bulk Sample Data Sheet

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Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904238-0024	1010-26	HM-13	Sheetrock	Bedroom 1		NAD		
021904238-0025	1010-27			Bedroom 2		NAD		
021904238-0026	1010-28			Bedroom 3		NAD		
021904238-0027	1010-29			Bathroom 1		NAD		
021904238-0028	1010-30			Bathroom 2		NAD		
021904238-0024A	1010-26	HM-14	Joint Compound	Bedroom 1		NAD		
021904238-0025A	1010-27			Bedroom 2		NAD		
021904238-0026A	1010-28			Bedroom 3		NAD		
021904238-0027A	1010-29			Bathroom 1		NAD		
021904238-0028A	1010-30			Bathroom 2		NAD		
021904238-0029	1010-31	HM-15	Ceramic Tile Thinset	Bathroom 1		NAD		
021904238-0030	1010-32			Bathroom 2		NAD		
021904238-0031	1010-33			Bathroom 2		NAD		
021904238-0032	1010-34	HM-16	Kitchen Sheet Vinyl (Black Flooring)	Kitchen		NAD		
021904238-0033	1010-35			Kitchen		NAD		
	1010-36			Kitchen		DNA		
021904238-0032A	1010-34	HM-17	Mastic below HM-16	Kitchen		NAD		
021904238-0033A	1010-35			Kitchen		NAD		
	1010-36			Kitchen		DNA		
021904238-0032B	1010-34	HM-18	Kitchen Sheet Vinyl (Flooring 2)	Kitchen	Chry	3%		
021904238-0033B	1010-35			Kitchen		NAD		
	1010-36			Kitchen		DNA		

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4

Asbestos - Bulk Sample Data Sheet

Project Name: **1010 California Drive**

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Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

* **Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904238-0032C	1010-34	HM-19	Mastic below HM-18	Kitchen		NAD		
021904238-0033C	1010-35			Kitchen		NAD		
	1010-36			Kitchen		DNA		
021904238-0032D	1010-34	HM-20	Kitchen Sheet Vinyl (Flooring 3)	Kitchen	Chry	20%		
021904238-0033D	1010-35			Kitchen	Chry	25%		
	1010-36			Kitchen		DNA		
021904238-0032E	1010-34	HM-21	Mastic below HM-20	Kitchen	Chry	3%		
021904238-0033E	1010-35			Kitchen	Chry	< 1%		
	1010-36			Kitchen		DNA		
021904238-0032F	1010-34	HM-22	Kitchen Sheet Vinyl (Bottom Flooring)	Kitchen	Chry	20%		
021904238-0033F	1010-35			Kitchen	Chry	30%		
	1010-36			Kitchen		DNA		
021904238-0032G	1010-34	HM-23	Mastic below HM-22	Kitchen	Chry	2%		
021904238-0033G	1010-35			Kitchen		NAD		
	1010-36			Kitchen		DNA		
021904238-0034	1010-37	HM-24	Roof Shingles	Roof		NAD		
021904238-0035	1010-38					NAD		
021904238-0047	1010-39						NAD	
021904238-0036	1010-40	HM-25	Felt Paper	Roof		NAD		
021904238-0037	1010-41					NAD		
021904238-0048	1010-42						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4

Asbestos - Bulk Sample Data Sheet

Project Name: **1010 California Drive**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904238-0038	1010-43	HM-26	Exterior Caulk			NAD		
021904238-0039	1010-44					NAD		
021904238-0049	1010-45						NAD	
021904238-0040	1010-46	HM-27	Exterior Window Glazing		Chry	2%		
021904238-0041	1010-47				Chry	2%		
	1010-48					DNA		
021904238-0042	1010-49	HM-28	Chimney Flashing	Roof		NAD		
021904238-0043	1010-50			Roof	Chry	5%		
	1010-51			Roof		DNA		
021904238-0044	1010-52	HM-29	White Duct Mastic	Crawlspace		NAD		
021904238-0045	1010-53			Crawlspace		NAD		
021904238-0050	1010-54			Crawlspace			NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

LABORATORY RESULTS

EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021904238
Customer ID: ESE52
Customer PO:
Project ID:

Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1010 California

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 06/21/2019 9:00 AM
Analysis Date: 06/21/2019 - 06/24/2019
Collected Date: 06/20/2019

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010-01 *021904238-0001*	Ceiling Texture	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-02 *021904238-0002*	Ceiling Texture	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-03 *021904238-0003*	Ceiling Texture	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-04-Sheetrock *021904238-0004*	Sheetrock/Joint Compound	Brown/White Fibrous Heterogeneous	12% Cellulose 1% Glass	87% Non-fibrous (Other)	None Detected
1010-04-Joint Compound *021904238-0004A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-05-Sheetrock *021904238-0005*	Sheetrock/Joint Compound	Brown/White Fibrous Heterogeneous	12% Cellulose 1% Glass	87% Non-fibrous (Other)	None Detected
1010-05-Joint Compound *021904238-0005A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-06-Sheetrock *021904238-0006*	Sheetrock/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
1010-06-Joint Compound *021904238-0006A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-07 *021904238-0007*	Cove Base Mastic	Tan/Beige Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-08 *021904238-0008*	Cove Base Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-10-Self Stick Floor Tile *021904238-0009*	18" Tan Floor Tile/Mastic	Gray/Tan/Black Non-Fibrous Homogeneous	<1% Cellulose	40% Quartz 60% Non-fibrous (Other)	None Detected
1010-10-Backing *021904238-0009A*	18" Tan Floor Tile/Mastic	Gray Non-Fibrous Homogeneous	10% Cellulose	60% Non-fibrous (Other)	30% Chrysotile
1010-10-Mastic *021904238-0009B*	18" Tan Floor Tile/Mastic	Yellow Non-Fibrous Homogeneous		<1% Ca Carbonate 100% Non-fibrous (Other)	None Detected

Initial report from: 06/24/2019 08:54:21

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EMSL Order: 021904238
Customer ID: ESE52
Customer PO:
Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010-11-Self Stick Floor Tile *021904238-0010*	18" Tan Floor Tile/Mastic	Gray/Tan/Black Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
1010-11-Backing *021904238-0010A*	18" Tan Floor Tile/Mastic	Tan Fibrous Homogeneous	5% Cellulose	35% Non-fibrous (Other)	60% Chrysotile
1010-11-Mastic *021904238-0010B*	18" Tan Floor Tile/Mastic	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	<1% Chrysotile
1010-13-Ceiling Tile *021904238-0011*	1x1 Ceiling Tile	Brown/Tan/Beige Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
1010-13-Mastic *021904238-0011A*	1x1 Ceiling Tile	Brown Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-14-Ceiling Tile *021904238-0012*	1x1 Ceiling Tile	Brown/Tan Fibrous Homogeneous	85% Cellulose	15% Non-fibrous (Other)	None Detected
1010-14-Mastic *021904238-0012A*	1x1 Ceiling Tile	Brown Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-15-Ceiling Tile *021904238-0013*	1x1 Ceiling Tile	Brown/Beige Fibrous Homogeneous	98% Cellulose	2% Non-fibrous (Other)	None Detected
1010-15-Mastic *021904238-0013A*	1x1 Ceiling Tile	Brown Non-Fibrous Homogeneous	<1% Cellulose <1% Fibrous (Other)	100% Non-fibrous (Other)	None Detected
1010-16 *021904238-0014*	Ceiling Texture	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-17 *021904238-0015*	Ceiling Texture	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
1010-18 *021904238-0016*	Ceiling Texture	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-19 *021904238-0017*	Ceiling Texture	White Non-Fibrous Homogeneous		.30% Ca Carbonate 99.7% Non-fibrous (Other)	None Detected
1010-20 *021904238-0018*	Ceiling Texture	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-21-Plaster *021904238-0019*	Plaster	White/Various Non-Fibrous Heterogeneous	1% Cellulose	15% Ca Carbonate 84% Non-fibrous (Other)	None Detected
1010-21-Sheetrock *021904238-0019A*	Plaster	Brown/Gray Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1010-22-Plaster *021904238-0020*	Plaster	White/Various Non-Fibrous Heterogeneous	1% Cellulose	15% Ca Carbonate 84% Non-fibrous (Other)	None Detected
1010-22-Sheetrock *021904238-0020A*	Plaster	Brown/Gray Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1010-23-Plaster *021904238-0021*	Plaster	White/Various Non-Fibrous Heterogeneous	1% Cellulose	15% Ca Carbonate 84% Non-fibrous (Other)	None Detected

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Customer ID: ESE52
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Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010-23-Sheetrock *021904238-0021A*	Plaster	Brown/Gray Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (Other)	None Detected
1010-24-Plaster *021904238-0022*	Plaster	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	35% Quartz 65% Non-fibrous (Other)	None Detected
1010-24-Sheetrock *021904238-0022A*	Plaster	Brown/Gray Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1010-25-Plaster *021904238-0023*	Plaster	Gray/Tan Non-Fibrous Homogeneous	<1% Cellulose	35% Quartz 65% Non-fibrous (Other)	None Detected
1010-25-Sheetrock *021904238-0023A*	Plaster	Brown/Gray Fibrous Heterogeneous	8% Cellulose	92% Non-fibrous (Other)	None Detected
1010-26-Sheetrock *021904238-0024*	Sheetrock/Joint Compound	Brown/Gray Fibrous Heterogeneous	40% Cellulose	60% Non-fibrous (Other)	None Detected
1010-26-Joint Compound *021904238-0024A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-27-Sheetrock *021904238-0025*	Sheetrock/Joint Compound	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
1010-27-Joint Compound *021904238-0025A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-28-Sheetrock *021904238-0026*	Sheetrock/Joint Compound	Gray Non-Fibrous Homogeneous	3% Cellulose	97% Non-fibrous (Other)	None Detected
1010-28-Joint Compound *021904238-0026A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-29-Sheetrock *021904238-0027*	Sheetrock/Joint Compound	Brown/Gray Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
1010-29-Joint Compound *021904238-0027A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-30-Sheetrock *021904238-0028*	Sheetrock/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (Other)	None Detected
1010-30-Joint Compound *021904238-0028A*	Sheetrock/Joint Compound	White Non-Fibrous Homogeneous		30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
1010-31 *021904238-0029*	Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous		30% Quartz 10% Ca Carbonate 60% Non-fibrous (Other)	None Detected
1010-32 *021904238-0030*	Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous	<1% Cellulose	30% Quartz 12% Ca Carbonate 58% Non-fibrous (Other)	None Detected

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EMSL Order: 021904238
Customer ID: ESE52
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Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010-33 *021904238-0031*	Ceramic Tile Thinset	Gray Non-Fibrous Homogeneous	<1% Cellulose	10% Quartz 5% Ca Carbonate 85% Non-fibrous (Other)	None Detected
1010-34-Black Flooring *021904238-0032*	Kitchen Sheet Vinyl	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1010-34-Mastic 1 *021904238-0032A*	Kitchen Sheet Vinyl	Yellow Non-Fibrous Homogeneous	<1% Cellulose <1% Synthetic	100% Non-fibrous (Other)	None Detected
1010-34-Flooring 2 *021904238-0032B*	Kitchen Sheet Vinyl	Gray/Yellow Non-Fibrous Homogeneous	3% Glass	94% Non-fibrous (Other)	3% Chrysotile
1010-34-Mastic 2 *021904238-0032C*	Kitchen Sheet Vinyl	Yellow Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-34-Flooring 3 *021904238-0032D*	Kitchen Sheet Vinyl	Brown/Yellow Fibrous Heterogeneous		80% Non-fibrous (Other)	20% Chrysotile
1010-34-Mastic 3 *021904238-0032E* *Possible contamination from flooring.*	Kitchen Sheet Vinyl	Yellow Non-Fibrous Homogeneous	<1% Cellulose	97% Non-fibrous (Other)	3% Chrysotile
1010-34-Bottom Flooring *021904238-0032F*	Kitchen Sheet Vinyl	Brown/Yellow Fibrous Heterogeneous		80% Non-fibrous (Other)	20% Chrysotile
1010-34-Mastic 4 *021904238-0032G* *Possible contamination form flooring.*	Kitchen Sheet Vinyl	Beige Non-Fibrous Homogeneous	<1% Cellulose	98% Non-fibrous (Other)	2% Chrysotile
1010-35-Black Flooring *021904238-0033*	Kitchen Sheet Vinyl	Gray/Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1010-35-Mastic *021904238-0033A*	Kitchen Sheet Vinyl	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-35-Flooring 2 *021904238-0033B*	Kitchen Sheet Vinyl	Gray/Beige Fibrous Heterogeneous	20% Cellulose 1% Glass	79% Non-fibrous (Other)	None Detected
1010-35-Mastic 2 *021904238-0033C*	Kitchen Sheet Vinyl	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
1010-35-Flooring 3 *021904238-0033D*	Kitchen Sheet Vinyl	Gray/Tan/Beige Fibrous Heterogeneous	1% Cellulose	74% Non-fibrous (Other)	25% Chrysotile
1010-35-Mastic 3 *021904238-0033E*	Kitchen Sheet Vinyl	Tan Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	<1% Chrysotile
1010-35-Bottom Flooring *021904238-0033F*	Kitchen Sheet Vinyl	Tan/Yellow/Orange Fibrous Heterogeneous	1% Cellulose	69% Non-fibrous (Other)	30% Chrysotile
1010-35-Mastic 4 *021904238-0033G*	Kitchen Sheet Vinyl	Tan/Beige Non-Fibrous Homogeneous	2% Cellulose	98% Non-fibrous (Other)	None Detected
1010-37 *021904238-0034*	Roof Shingles	Black Fibrous Heterogeneous	1% Cellulose 3% Glass	96% Non-fibrous (Other)	None Detected

Initial report from: 06/24/2019 08:54:21

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Project ID:

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010-38 *021904238-0035*	Roof Shingles	Gray/Black/Green Fibrous Heterogeneous	5% Glass	95% Non-fibrous (Other)	None Detected
1010-40 *021904238-0036*	Felt Paper	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
1010-41 *021904238-0037*	Felt Paper	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
1010-43 *021904238-0038*	Exterior Caulk	White Non-Fibrous Homogeneous		5% Ca Carbonate 95% Non-fibrous (Other)	None Detected
1010-44 *021904238-0039*	Exterior Caulk	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
1010-46 *021904238-0040*	Exterior Window Glazing	Tan/White Non-Fibrous Homogeneous	<1% Cellulose <1% Fibrous (Other)	10% Ca Carbonate 88% Non-fibrous (Other)	2% Chrysotile
1010-47 *021904238-0041*	Exterior Window Glazing	Tan/White Non-Fibrous Homogeneous	<1% Cellulose 3% Fibrous (Other)	10% Ca Carbonate 85% Non-fibrous (Other)	2% Chrysotile
1010-49 *021904238-0042*	Chimney Flashing	Brown/Black Fibrous Homogeneous	3% Cellulose 3% Fibrous (Other)	94% Non-fibrous (Other)	None Detected
1010-50 *021904238-0043*	Chimney Flashing	Brown/Black Non-Fibrous Homogeneous	<1% Cellulose	1% Quartz 94% Non-fibrous (Other)	5% Chrysotile
1010-52 *021904238-0044*	White Duct Mastic	Tan/Black Fibrous Heterogeneous	1% Cellulose 5% Glass	94% Non-fibrous (Other)	None Detected
1010-53 *021904238-0045*	White Duct Mastic	Tan/Black/Silver Non-Fibrous Homogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected

Analyst(s)

Nicole Shutts (34)
Ryan Rains (41)
Scott Combs (4)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, 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. All samples received in acceptable condition unless otherwise noted. 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. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

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

Initial report from: 06/24/2019 08:54:21

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Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1010 California

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 06/21/2019 9:00 AM
Analysis Date: 06/25/2019 - 07/17/2019
Collected Date: 06/20/2019

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
1010-15-Mastic *021904238-0013A*	1x1 Ceiling Tile	Brown Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1010-9 *021904238-0046*	Cove Base Mastic	Beige Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1010-39 *021904238-0047*	Roof Shingles	Gray/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
1010-42 *021904238-0048*	Felt Paper	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1010-45 *021904238-0049*	Exterior Caulk	White Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
1010-54 *021904238-0050*	White Duct Mastic	Beige Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)
Stephen Bennett (6)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Report amended: 07/17/2019 16:28:17 Replaces initial report from: 06/25/2019 17:51:13 Reason Code: Client-Additional Analysis

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 4238

PHONE:
FAX:

Company Name : ABS Environmental, Inc.		**EMSL Customer ID:**	
Street: 1416 Chapin Road		**City:** Chapin	**State/Province:** SC
Zip/Postal Code: 29036	**Country:** USA	**Telephone #:** 803-345-3833	**Fax #:** 803-345-2823
Report To (Name): Jeff Rivers		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: jrivers@absenv.com		**Purchase Order:**	
Project Name/Number: 1010 California		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: SC		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

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

Turnaround Time (TAT) Options* – Please Check

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

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

PCM - Air ☐ Check if samples are from NY
☐ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☑ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☑ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM EPA 600/R-93/116 with milling prep (<1%)
☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
☐ TEM Qualitative via Filtration Prep
☐ TEM Qualitative via Drop Mount Prep
☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name:

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1010/01-03	Ceiling Texture		
1010/04-06	Sheetrock/Joint Compound		
1010/07-09	Cove Base Mastic	TEM NOB	If Negative
1010/10-12	18" Tan Floor Tile/Mastic	TEM NOB	If Negative
1010/13-15	1x1 Ceiling Tile		

Client Sample # (s): 1010-01 - 1010-54 **Total # of Samples:** 54

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** 6/21/19 **Time:** 9AM

Comments/Special Instructions:
② EFX 814335023252

Controlled Document – Asbestos COC – R10 – 05/09/2016

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 4238

PHONE:
FAX:

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

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1010/16-20	Ceiling Texture		
1010/21-25	Plaster		
1010/26-30	Sheetrock/Joint Compound		
1010/31-33	Ceramic Tile Thinset		
1010/34-36	Kitchen Sheet Vinyl	TEM NOB	If Negative
1010/37-39	Roof Shingles	TEM NOB	If Negative
1010/40-42	Felt Paper	TEM NOB	If Negative
1010/43-45	Exterior Caulk	TEM NOB	If Negative
1010/46-48	Exterior Window Glazing	TEM NOB	If Negative
1010/49-51	Chimney Flashing	TEM NOB	If Negative
1010/52-54	White Duct Mastic	TEM NOB	If Negative

***Comments/Special Instructions:**

Page _____ of _____ pages

July 17, 2019

Asbestos Survey
For

Shed: 1010 California Drive, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19008B**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

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1.0 EXECUTIVE SUMMARY

2.0 APPENDIX

A. Site Map

B. Tables

C. Laboratory Results

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 1010 California Drive in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the shed.

The subject structure is a wood-framed building with wood siding and a shingled roof. Interior finishes include exposed wood-framed walls and ceilings and hardwood floors The building measures approximately 540 ft^2.

Two (2) suspect materials were identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to EMSL Analytical, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, none of the samples collected contained asbestos > 1%.

Limitations

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

SITE MAP

TABLES

Table #1

Asbestos - Suspect Material Data Sheet

Project Name: **1010 California Drive: Shed**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Roof Shingles	M	3	810 ft^2	NF/G	PD	N	N		NA
HM-02	Felt Paper	M	3	810 ft^2	NF/G	LPD	N	N		NA

Table #2

Asbestos - Bulk Sample Data Sheet

Project Name: **1010 California Drive: Shed**

Project Address: 1010 California Dr., Columbia, SC **Date:** 17-Jul-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
021904241-0001	1010A-01	HM-01	Shingles	Roof		NAD		
021904241-0002	1010A-02					NAD		
021904241-0005	1010A-03						NAD	
021904241-0003	1010A-04	HM-02	Felt Paper	Roof		NAD		
021904241-0004	1010A-05					NAD		
021904241-0006	1010A-06						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

LABORATORY RESULTS

EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021904241
Customer ID: ESE52
Customer PO:
Project ID:

Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1010 California - Storage Shed

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 06/21/2019 9:00 AM
Analysis Date: 06/21/2019
Collected Date: 06/20/2019

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

			Non-Asbestos		Asbestos
Sample	**Description**	**Appearance**	**% Fibrous**	**% Non-Fibrous**	**% Type**
1010A-01 *021904241-0001*	Roof Shingles	Black Fibrous Heterogeneous	4% Glass	96% Non-fibrous (Other)	None Detected
1010A-02 *021904241-0002*	Roof Shingles	Gray/Black Fibrous Heterogeneous	<1% Cellulose 5% Glass	95% Non-fibrous (Other)	None Detected
1010A-04 *021904241-0003*	Felt Paper	Black Fibrous Homogeneous	60% Cellulose	40% Non-fibrous (Other)	None Detected
1010A-05 *021904241-0004*	Felt Paper	Black Fibrous Homogeneous	70% Cellulose	30% Non-fibrous (Other)	None Detected

Analyst(s)
Ryan Rains (2)
Scott Combs (2)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 600/M4-82-020 "Interim Method"), but augmented with procedures outlined in the 1993 ("final") version of the method. This report relates only to the samples reported above, 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. All samples received in acceptable condition unless otherwise noted. 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. EMSL recommends gravimetric reduction for all non-friable organically bound materials prior to analysis. Estimation of uncertainty is available on request.

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

Initial report from: 06/24/2019 08:06:34

EMSL Analytical, Inc.
706 Gralin Street Kernersville, NC 27284
Tel/Fax: (336) 992-1025 / (336) 992-4175
http://www.EMSL.com / greensborolab@emsl.com

EMSL Order: 021904241
Customer ID: ESE52
Customer PO:
Project ID:

Attention: Jeff Rivers
ABS Environmental
1416 Chapin Road
Chapin, SC 29036

Project: 1010 California - Storage Shed

Phone: (803) 345-3833
Fax: (803) 345-2823
Received Date: 06/21/2019 9:00 AM
Analysis Date: 06/25/2019
Collected Date: 06/20/2019

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
1010A-03 *021904241-0005*	Roof Shingles	Gray/Black Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected
1010A-06 *021904241-0006*	Felt Paper	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)
Stephen Bennett (2)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 06/25/2019 17:43:06

EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number *(Lab Use Only)*: 4241

PHONE:
FAX:

Company Name : ABS Environmental, Inc.		**EMSL Customer ID:**	
Street: 1416 Chapin Road		**City:** Chapin	**State/Province:** SC
Zip/Postal Code: 29036	**Country:** USA	**Telephone #:** 803-345-3833	**Fax #:** 803-345-2823
Report To (Name): Jeff Rivers		**Please Provide Results:** ☐ Fax ☑ Email	
Email Address: jrivers@absenv.com		**Purchase Order:**	
Project Name/Number: 1010 California - Storage Shed		**EMSL Project ID** *(Internal Use Only)*:	
U.S. State Samples Taken: SC		**CT Samples:** ☐ Commercial/Taxable ☐ Residential/Tax Exempt	

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

Turnaround Time (TAT) Options* – Please Check

☐ 3 Hour | ☐ 6 Hour | ☒ 24 Hour | ☐ 48 Hour | ☒ 72 Hour | ☐ 96 Hour | ☐ 1 Week | ☐ 2 Week

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

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☑ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)

- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☑ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM EPA 600/R-93/116 with milling prep (<1%)
- ☐ PLM EPA 600/R-93/116 with milling prep (<0.25%)
- ☐ TEM EPA 600/R-93/116 with milling prep (<0.1%)
- ☐ TEM Qualitative via Filtration Prep
- ☐ TEM Qualitative via Drop Mount Prep
- ☐ Cincinnati Method EPA 600/R-04/004 – PLM/TEM (BC only)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group**

Filter Pore Size (Air Samples): ☐ 0.8µm ☐ 0.45µm

Samplers Name:

Samplers Signature:

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1010A/01-03	Roof Shingles	TEM NOB	If Negative
1010A/04-06	Felt Paper	TEM NOB	If Negative

Client Sample # (s): 1010A-01 - 1010A-06 **Total # of Samples:** 6

Relinquished (Client): **Date:** **Time:**

Received (Lab): **Date:** 6/21/19 **Time:** 9AM

Comments/Special Instructions:
② EFX 814335023952

Controlled Document – Asbestos COC – R10 – 05/09/2016

March 12, 2019

Asbestos Survey
For

Main House: 4717 Oxford Road, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19017A**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

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1.0 EXECUTIVE SUMMARY

2.0 APPENDIX

A. Drawing

B. Site Map

C. Tables

D. Laboratory Results

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 4717 Oxford Road in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the vacant residence.

The subject structure is a single-family residence built over a crawlspace. The roof is built in a gable configuration and is covered with shingles. The exterior is clad primarily with composite siding. Interior finishes include:

Ceilings: Spray applied texture on sheetrock with acoustical ceiling tiles on the porch
Walls: Sheetrock
Floors: Wood throughout

The residence measures approximately 960 ft^2.

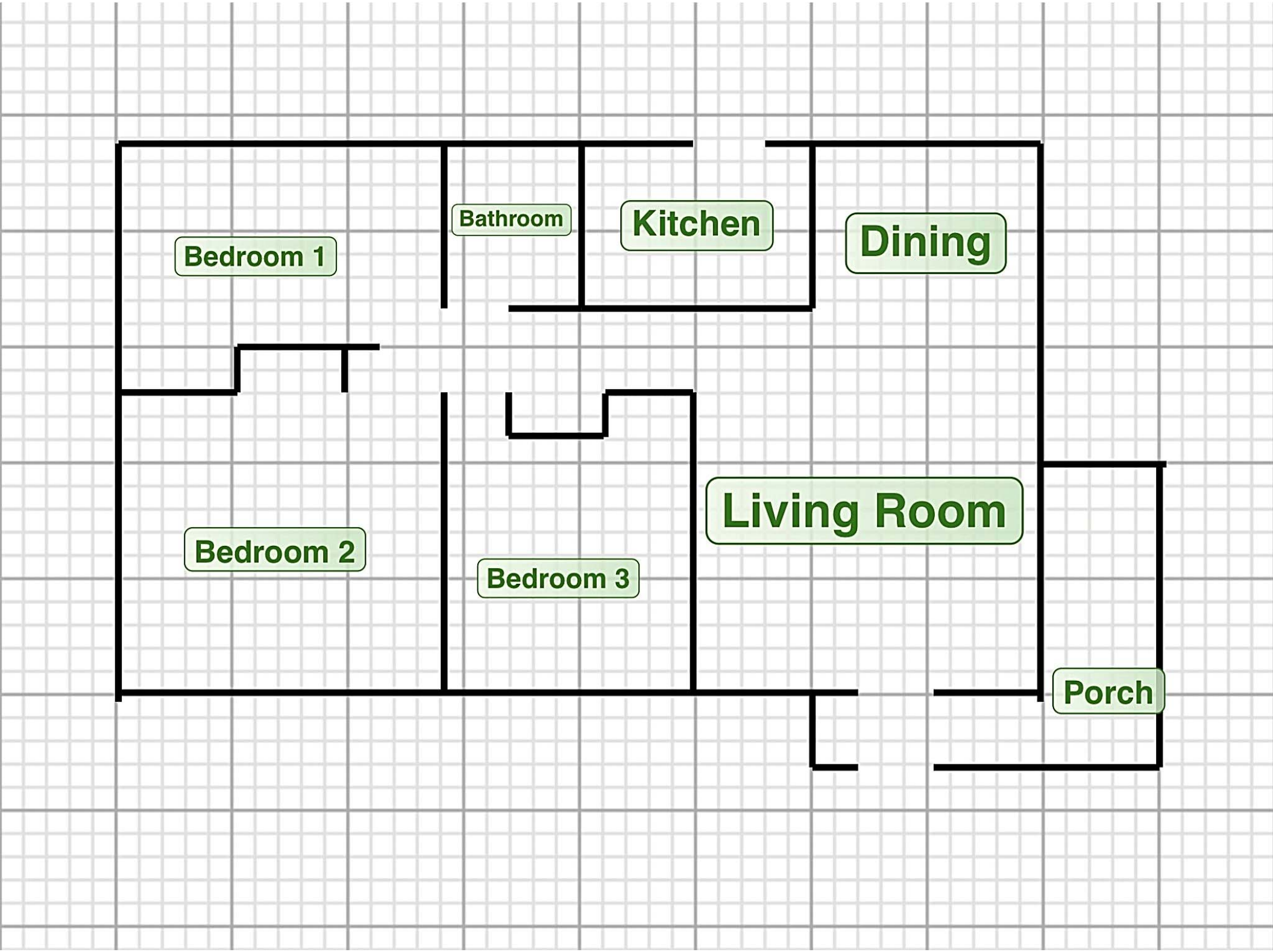
Thirteen (13) suspect materials were identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to SAI, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, those materials containing asbestos > 1 % include approximately

- 1,536 ft^2 of exterior siding.
- 10 LF of chimney flashing.

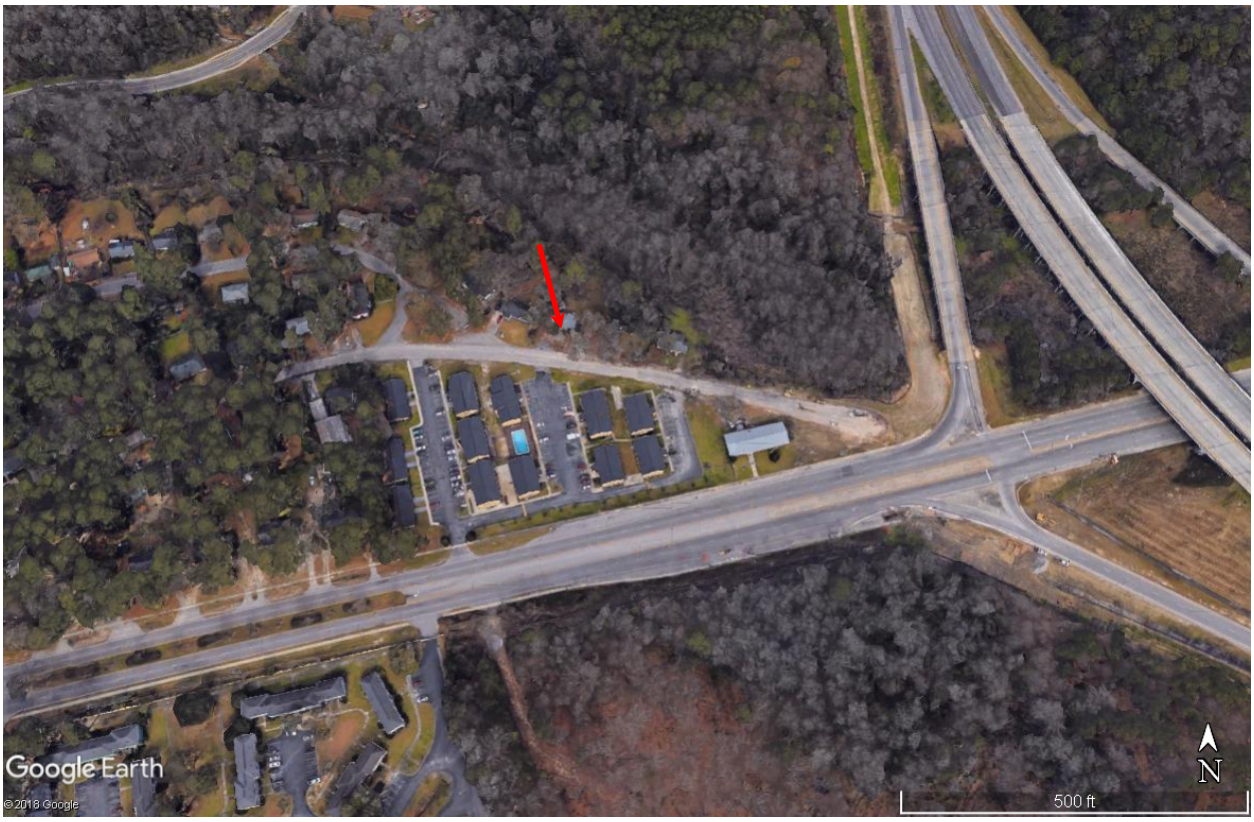
<u>Limitations</u>

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

DRAWING


Bedroom 1
Bathroom
Kitchen
Dining
Bedroom 2
Bedroom 3
Living Room
Porch

SITE MAP



TABLES

Table #1
Asbestos Containing Building Material (ACBM)

Project Name: **4717 Oxford Road: Main House**
Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

* Assumed to Contain Asbestos > 1%

Observed ACBM		
Material	EPA AHERA Category	Quantity
Exterior Siding	Miscellaneous	1,536 ft^2
Chimney Flashing	Miscellaneous	10 LF

Table #2
Non-Friable ACBM

Project Name: **4717 Oxford Road: Main House**
Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

* Assumed to Contain Asbestos > 1%

Non-Friable ACBM	
Material	Quantity
Exterior Siding	1,536 ft^2
Chimney Flashing	10 LF

Table #3

Asbestos - Suspect Material Data Sheet

Project Name: **4717 Oxford Road: Main House**

Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Ceiling Texture	S	3	960 ft^2	F/G	PD	N			NA
HM-02	Sheetrock	M	3	3,360 ft^2	F/G	PD	N			NA
HM-03	Joint Comp: Ceilings	S	5	960 ft^2	F/G	PD	N			NA
	Joint Comp: Walls			2,400 ft^2	F/G	PD				
HM-04	Attic Insulation	T	3	960 ft^2	F/G	PD	N			NA
HM-05	Wire Wrap	M	3	12 LF	F/G	PD	N	N		NA
HM-06	Exterior Caulk	M	3	8 windows 3 doors	NF/G	PD	N	N		NA
HM-07	Exterior Siding	M	3	1,536 ft^2	NF/G	PD	P			2
HM-08	Roof Shingles	M	3	1,440 ft^2	NF/G	PD	N	N		NA
HM-09	Felt Paper under Roof Shingles	M	3	1,440 ft^2	NF/G	LPD	N	N		NA

Table #3
Asbestos - Suspect Material Data Sheet

Project Name: **4717 Oxford Road: Main House**

Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-10	Felt Paper behind Exterior Siding	M	3	1,536 ft^2	NF/G	LPD	N	N		NA
HM-11	2' x 4' Tiles	M	3	95 ft^2	F/G	PD	N			NA
HM-12	Rolled Roof at Porch	M	3	95 ft^2	NF/G	PD	N	N		NA
HM-13	Chimney Flashing	M	3	10 LF	NF/G	PD	N	P		2

Table #4
Asbestos - Bulk Sample Data Sheet

Project Name: **4717 Oxford Road: Main House**

Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
71904408PLM_1	4717-01	HM-01	Ceiling Texture	Living Room		NAD		
71904408PLM_2	4717-02			Bedroom 1		NAD		
71904408PLM_3	4717-03			Bedroom 3		NAD		
71904408PLM_4	4717-04 - A	HM-02	Sheetrock	Bedroom 2		NAD		
71904408PLM_5	4717-05 - A			Dining		NAD		
71904408PLM_8	4717-08 - A			Kitchen		NAD		
71904408PLM_36	4717-04 - B	HM-03	Joint Compound	Bedroom 2		NAD		
71904408PLM_37	4717-05 - B			Dining		NAD		
71904408PLM_6	4717-06			Kitchen		NAD		
71904408PLM_7	4717-07			Bathroom		NAD		
71904408PLM_38	4717-08 - B			Living Room		NAD		
71904408PLM_9	4717-09	HM-04	Attic Insulation	Attic		NAD		
71904408PLM_10	4717-10			Attic		NAD		
71904408PLM_11	4717-11			Attic		NAD		
71904408PLM_12	4717-12	HM-05	Wire Wrap	Hallway		NAD		
71904408PLM_13	4717-13					NAD		
71904540TBS_1	4717-14						NAD	
71904408PLM_15	4717-15	HM-06	Exterior Caulk			NAD		
71904408PLM_16	4717-16					NAD		
71904540TBS_2	4717-17						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile
Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #4
Asbestos - Bulk Sample Data Sheet

Project Name: **4717 Oxford Road: Main House**
Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM
Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM
Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
71904408PLM_18	4717-18	HM-07	Exterior Siding		Chry	15%		
71904408PLM_19	4717-19				Chry	15%		
71904408PLM_20	4717-20				Chry	15%		
71904408PLM_21	4717-21	HM-08	Shingles	Roof		NAD		
71904408PLM_22	4717-22					NAD		
71904540TBS_3	4717-23						NAD	
71904408PLM_24	4717-24	HM-09	Felt Paper under Roof Shingles	Roof		NAD		
71904408PLM_25	4717-25					NAD		
71904540TBS_4	4717-26						NAD	
71904408PLM_27	4717-27	HM-10	Felt Paper behind Exterior Siding			NAD		
71904408PLM_28	4717-28					NAD		
71904540TBS_5	4717-29						NAD	
71904408PLM_30	4717-30	HM-11	2' x 4' Tiles on Walls and Ceilings at Porch	Porch		NAD		
71904408PLM_31	4717-31			Porch		NAD		
71904408PLM_32	4717-32			Porch		DNA		
71904408PLM_33	4717-33	HM-12	Rolled Roof at Porch			NAD		
71904408PLM_34	4717-34					NAD		
71904540TBS_6	4717-35						NAD	
71906222PLM_1	4717-36	HM-13	Chimney Flashing			NAD		
71906222PLM_2	4717-37					NAD		
71906294TBS_1	4717-38				Anth		1.50%	

* NAD = No Asbestos Detected
Amos = Amosite
DNA = Did Not Analyze
Croc = Crocidilite
Chry = Chrysotile
Anth = Anthophylite

LABORATORY RESULTS

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71904408
Analysis ID: 71904408_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Project: 4717 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-01 / *71904408PLM_1*	Ceiling Texture	**None Detected**		**90% Other** **10% Vermiculite**	White Non Fibrous Homogeneous Teased
4717-02 / *71904408PLM_2*	Ceiling Texture	**None Detected**		**90% Other** **10% Vermiculite**	White Non Fibrous Homogeneous Teased
4717-03 / *71904408PLM_3*	Ceiling Texture	**None Detected**		**90% Other** **10% Vermiculite**	White Non Fibrous Homogeneous Teased
4717-04 - A / *71904408PLM_4*	Sheetrock/Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	White, Brown Non Fibrous Homogeneous Teased
4717-04 - B / *71904408PLM_36*	Sheetrock/Joint Compound *joint compound*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Teased
4717-05 - A / *71904408PLM_5*	Sheetrock/Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	Brown, White Non Fibrous Homogeneous Teased
4717-05 - B / *71904408PLM_37*	Sheetrock/Joint Compound *joint compound*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Teased
4717-06 / *71904408PLM_6*	Sheetrock/Joint Compound *joint compound only*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Teased

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (38)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71904408
Analysis ID: 71904408_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Project: 4717 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-07 / *71904408PLM_7*	Joint Compound	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Teased
4717-08 - A / *71904408PLM_8*	Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	Brown, White Non Fibrous Homogeneous Teased
4717-08 - B / *71904408PLM_38*	Joint Compound *joint compound*	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Teased
4717-09 / *71904408PLM_9*	Attic Insulation	**None Detected**	**60% Mineral Wool** **30% Cellulose**	**10% Other**	Brown, Gray Fibrous Heterogeneous Teased
4717-10 / *71904408PLM_10*	Attic Insulation	**None Detected**	**60% Mineral Wool** **30% Cellulose**	**10% Other**	Brown, Gray Fibrous Heterogeneous Teased
4717-11 / *71904408PLM_11*	Attic Insulation	**None Detected**	**60% Mineral Wool** **30% Cellulose**	**10% Other**	Brown, Gray Fibrous Heterogeneous Teased
4717-12 / *71904408PLM_12*	Wire Insulation	**None Detected**	**40% Cellulose**	**60% Other**	Black Fibrous Heterogeneous Teased, Dissolved
4717-13 / *71904408PLM_13*	Wire Insulation	**None Detected**	**40% Cellulose**	**60% Other**	Black Fibrous Heterogeneous Teased, Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (38)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4717 Oxford

Lab Order ID: 71904408
Analysis ID: 71904408_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-14 / *71904408PLM_14*	Wire Insulation / *TEM*	**Not Analyzed**			
4717-15 / *71904408PLM_15*	Exterior Caulk	**None Detected**		**100% Other**	Gray, White Non Fibrous Heterogeneous Ashed
4717-16 / *71904408PLM_16*	Exterior Caulk	**None Detected**		**100% Other**	Gray, White Non Fibrous Heterogeneous Ashed
4717-17 / *71904408PLM_17*	Exterior Caulk / *TEM*	**Not Analyzed**			
4717-18 / *71904408PLM_18*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4717-19 / *71904408PLM_19*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4717-20 / *71904408PLM_20*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4717-21 / *71904408PLM_21*	Roof Shingles	**None Detected**	**10% Fiber Glass**	**90% Other**	Black Non Fibrous Homogeneous Dissolved

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Byron Stroble (38)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4717 Oxford

Lab Order ID: 71904408
Analysis ID: 71904408_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-22 / *71904408PLM_22*	Roof Shingles	**None Detected**	**10% Fiber Glass**	**90% Other**	Black Non Fibrous Homogeneous Dissolved
4717-23 / *71904408PLM_23*	Roof Shingles *TEM*	**Not Analyzed**			
4717-24 / *71904408PLM_24*	Felt Paper under Roof Shingles	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Homogeneous Teased, Dissolved
4717-25 / *71904408PLM_25*	Felt Paper under Roof Shingles	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Homogeneous Teased, Dissolved
4717-26 / *71904408PLM_26*	Felt Paper under Roof Shingles *TEM*	**Not Analyzed**			
4717-27 / *71904408PLM_27*	Felt Paper behind exterior siding	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Homogeneous Teased, Dissolved
4717-28 / *71904408PLM_28*	Felt Paper behind exterior siding	**None Detected**	**70% Cellulose**	**30% Other**	Black Fibrous Homogeneous Teased, Dissolved
4717-29 / *71904408PLM_29*	Felt Paper behind exterior siding *TEM*	**Not Analyzed**			

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (38)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71904408
Analysis ID: 71904408_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Project: 4717 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-30	2x4 Tiles on Walls and Ceilings at Porch	**None Detected**	**45% Cellulose** **45% Mineral Wool**	**10% Other**	Gray Fibrous Homogeneous
71904408PLM_30					Teased, Ashed
4717-31	2x4 Tiles on Walls and Ceilings at Porch	**None Detected**	**45% Cellulose** **45% Mineral Wool**	**10% Other**	Gray Fibrous Homogeneous
71904408PLM_31					Teased, Ashed
4717-32	2x4 Tiles on Walls and Ceilings at Porch	**None Detected**	**45% Cellulose** **45% Mineral Wool**	**10% Other**	Gray Fibrous Homogeneous
71904408PLM_32					Teased, Ashed
4717-33	Rolled Roof at Porch	**None Detected**	**10% Synthetic Fibers**	**90% Other**	Black Non Fibrous Homogeneous
71904408PLM_33					Dissolved
4717-34	Rolled Roof at Porch	**None Detected**	**10% Synthetic Fibers**	**90% Other**	Black Non Fibrous Homogeneous
71904408PLM_34					Dissolved
4717-35	Rolled Roof at Porch	**Not Analyzed**			
71904408PLM_35	*TEM*				

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Byron Stroble (38)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

71904408

Client:	ABS ENVIRONMENTAL	***Instructions:***
Contact:	JEFF RIVERS	*Use Column "B" for your contact info*
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	*To See an Example Click the*
Fax:	803-345-2823	*bottom Example Tab.*
Email:	JRIVERS@ABSENV.COM	
		Enter samples between "<<" and ">>"
Project:	4717 Oxford	***Begin Samples with a "<< "above the first sample***
		and end with a ">>" below the last sample.
Client Notes:	72 HR TEM NOB TAT	*Only Enter your data on the first sheet "Sheet1"*
P.O. #.	[Enter P.O. # Here]	*Note: Data 1 and Data 2 are optional*
Date Submitted:	2/18/2019 0:00	*fields that do not show up on the official*
		report, however they will be included
Analysis:	EPA PLM 600	*in the electronic data returned to you*
TurnAroundTime:	24 HR TAT	*to facilitate your reintegration of the report data.*

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717-01	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-02	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-03	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-04	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-05	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-06	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-07	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4717-08	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4717-09	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-10	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-11	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-12		Wire Insulation	
4717-13		Wire Insulation	
4717-14		Wire Insulation	
4717-15		Exterior Caulk	
4717-16		Exterior Caulk	
4717-17		Exterior Caulk	TEM NOB If Negative
4717-18		Exterior Siding	

Accepted ☑

Rejected ☐

Relinquished By

Received By

Kemsher 2-19 10:30am

71904408

4717-19	Exterior Siding	
4717-20	Exterior Siding	
4717-21	Roof Shingles	
4717-22	Roof Shingles	
4717-23	Roof Shingles	TEM NOB If Negative
4717-24	Felt Paper under Roof Shingles	
4717-25	Felt Paper under Roof Shingles	
4717-26	Felt Paper under Roof Shingles	TEM NOB If Negative
4717-27	Felt Paper behind exterior siding	
4717-28	Felt Paper behind exterior siding	
4717-29	Felt Paper behind exterior siding	TEM NOB If Negative
4717-30	2x4 Tiles on Walls and Ceilings at Porch	
4717-31	2x4 Tiles on Walls and Ceilings at Porch	
4717-32	2x4 Tiles on Walls and Ceilings at Porch	
4717-33	Rolled Roof at Porch	
4717-34	Rolled Roof at Porch	
4717-35	Rolled Roof at Porch	TEM NOB If Negative

>>

Relinquished By

Received By

Bulk Asbestos Analysis
by Transmission Electron Microscopy

Semi-Quantitative
Chatfield SOP 1988-02 Rev. 1

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4717 Oxford

Lab Order ID: 71904540
Analysis ID: 71904540_TB
Date Received: 2/20/2019
Date Reported: 2/25/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Organic *(Wt. %)*	Acid Sol. *(Wt. %)*	Asbestos *(Wt. %)*	LCL-UCL *(Wt. %)*
4717-14 / *71904540TBS_1*	**Wire Insulation**	**91%**	**-**	**None Detected**	
4717-17 / *71904540TBS_2*	**Exterior Caulk**	**32%**	**-**	**None Detected**	
4717-23 / *71904540TBS_3*	**Roof Shingles**	**22%**	**-**	**None Detected**	
4717-26 / *71904540TBS_4*	**Felt Paper under Roof Shingles**	**96%**	**-**	**None Detected**	
4717-29 / *71904540TBS_5*	**Felt Paper behind exterior siding**	**97%**	**-**	**None Detected**	
4717-35 / *71904540TBS_6*	**Rolled Roof at Porch**	**51%**	**-**	**None Detected**	

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Russell Shelton (6)

Analyst

Approved Signatory

~~71904408~~
71904540

Client:	ABS ENVIRONMENTAL
Contact:	JEFF RIVERS
Address:	1416 CHAPIN RD.-CHAPIN, SC
Phone:	803-260-2883
Fax:	803-345-2823
Email:	JRIVERS@ABSENV.COM
Project:	4717 Oxford
Client Notes:	72 HR TEM NOB TAT
P.O. #:	[Enter P.O. # Here]
Date Submitted:	2/18/2019 0:00
Analysis:	EPA PLM 600
TurnAroundTime:	24 HR TAT

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute
4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717-01	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-02	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-03	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4717-04	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-05	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-06	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4717-07	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4717-08	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4717-09	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-10	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-11	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4717-12		Wire Insulation	
4717-13		Wire Insulation	
4717-14		Wire Insulation	
4717-15		Exterior Caulk	
4717-16		Exterior Caulk	
4717-17		Exterior Caulk	
4717-18		Exterior Siding	

Accepted ☑

Rejected ☐

TEM NOB If Negative

Relinquished By

Received By

2-19 10:30am

~~71904408~~
71904540

4717-19	Exterior Siding	
4717-20	Exterior Siding	
4717-21	Roof Shingles	
4717-22	Roof Shingles	
4717-23	Roof Shingles	TEM NOB If Negative
4717-24	Felt Paper under Roof Shingles	
4717-25	Felt Paper under Roof Shingles	
4717-26	Felt Paper under Roof Shingles	TEM NOB If Negative
4717-27	Felt Paper behind exterior siding	
4717-28	Felt Paper behind exterior siding	
4717-29	Felt Paper behind exterior siding	TEM NOB If Negative
4717-30	2x4 Tiles on Walls and Ceilings at Porch	
4717-31	2x4 Tiles on Walls and Ceilings at Porch	
4717-32	2x4 Tiles on Walls and Ceilings at Porch	
4717-33	Rolled Roof at Porch	
4717-34	Rolled Roof at Porch	
4717-35	Rolled Roof at Porch	TEM NOB If Negative

>>

Relinquished By

Received By

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71906222
Analysis ID: 71906222_PLM
Date Received: 3/7/2019
Date Reported: 3/7/2019

Project: 4717 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717-36	Chimney Flashing	None Detected		100% Other	Black Non Fibrous Homogeneous
71906222PLM_1					Crushed, Dissolved
4717-37	Chimney Flashing	None Detected		100% Other	Black Non Fibrous Homogeneous
71906222PLM_2					Crushed, Dissolved
4717-38	Chimney Flashing	None Detected		100% Other	Black Non Fibrous Homogeneous
71906222PLM_3					Crushed, Dissolved

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William Howell (3)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

719062222

Client:	ABS ENVIRONMENTAL	***Instructions:***
Contact:	JEFF RIVERS	*Use Column "B" for your contact info*
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	*To See an Example Click the bottom Example Tab.*
Fax:	803-345-2823	
Email:	JRIVERS@ABSENV.COM	
Project:	4717 Oxford	***Enter samples between "<<" and ">>" Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***
Client Notes:	72 HR TAT for TEM NOB	*Only Enter your data on the first sheet "Sheet1"*
P.O. #.	[Enter P.O. # Here]	
Date Submitted:	3/6/2019 0:00	*Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.*
Analysis:	EPA PLM 600	
TurnAroundTime:	24 HR TAT	

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717-36	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4717-37	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4717-38	[Enter data of your choosing here]	Chimney Flashing	TEM NOB If Negative
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By

L Dimmick 3.7 10:30AM

Bulk Asbestos Analysis
by Transmission Electron Microscopy

Semi-Quantitative
Chatfield SOP 1988-02 Rev. 1

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4717 Oxford

Lab Order ID: 71906294

Analysis ID: 71906294_TB
Date Received: 3/8/2019
Date Reported: 3/13/2019

Sample ID	Description	Organic	Acid Sol.	Asbestos		LCL-UCL
Lab Sample ID	*Lab Notes*	*(Wt. %)*	*(Wt. %)*	*(Wt. %)*		*(Wt. %)*
4717-38	**Chimney flashing**	**24%**	**-**	**1.5 %**	**Anthophyllite**	**1.4% - 1.7%**
71906294TBS_1						

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

Russell Shelton (1)

Analyst

Approved Signatory

~~71906222~~
71906294

Client:	ABS ENVIRONMENTAL	
Contact:	JEFF RIVERS	
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	
Fax:	803-345-2823	
Email:	JRIVERS@ABSENV.COM	
Project:	4717 Oxford	
Client Notes:	72 HR TAT for TEM NOB	
P.O. #:	[Enter P.O. # Here]	
Date Submitted:	3/6/2019 0:00	
Analysis:	EPA PLM 600	
TurnAroundTime:	24 HR TAT	

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717-36	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4717-37	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4717-38	[Enter data of your choosing here]	Chimney Flashing	TEM NOB If Negative
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By
L Dimmick 3-7 10:30AM

March 12, 2019

Asbestos Survey
For

Metal Building: 4717 Oxford Road, Columbia

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19017C**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/9/18
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/9/18
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/9/18

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1.0 EXECUTIVE SUMMARY 2

2.0 APPENDIX

A. Site Map

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by City of Columbia to perform an asbestos survey at 4717 Oxford Road in Columbia, SC. The primary objective of this survey was to identify, sample, and physically assess suspect asbestos containing building materials (ACBM) associated with the metal building.

The subject structure building is a wood-framed building with metal siding a metal roof. Interior finishes include exposed wood-framed walls and ceilings with a wood floor. The building measures approximately 100 ft^2. No suspect materials were observed, therefore no samples were collected.

Limitations

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

SITE MAP

March 12, 2019

Asbestos Survey
For

Shed: 4717 Oxford Road, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19017B**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

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1.0 EXECUTIVE SUMMARY

2.0 APPENDIX

A. Site Map

B. Tables

C. Laboratory Results

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 4717 Oxford Road in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the shed.

The subject structure is a wood-framed building with wood and metal siding and a shingled roof. Interior finishes include exposed wood-framed walls and ceilings with a wood floor. The building measures approximately 96 ft^2.

One (1) suspect material was identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to SAI, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, none of the samples collected contained asbestos > 1%.

Limitations

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

SITE MAP

TABLES

Table #1
Asbestos - Suspect Material Data Sheet

Project Name: **4717 Oxford Road - Shed**

Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Roof Shingles	M	3	96 ft^2	NF/G	PD	N	N		NA

Table #2

Asbestos - Bulk Sample Data Sheet

Project Name: **4717 Oxford Road - Shed**

Project Address: 4717 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
71906225PLM_1	4717S-01	HM-01	Roof Shingles			NAD		
71906225PLM_2	4717S-02					NAD		
71906303TBS_1	4717S-03						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile

Amos = Amosite Croc = Crocidilite Anth = Anthophylite

LABORATORY RESULTS

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71906225
Analysis ID: 71906225_PLM
Date Received: 3/7/2019
Date Reported: 3/7/2019

Project: 4717 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4717S-01	Roof Shingles	None Detected	15% Fiber Glass 10% Cellulose	75% Other	Black, White Non Fibrous Heterogeneous
71906225PLM_1					Teased, Dissolved
4717S-02	Roof Shingles	None Detected	15% Fiber Glass 10% Cellulose	75% Other	Black, White Non Fibrous Heterogeneous
71906225PLM_2					Teased, Dissolved
4717S-03	Roof Shingles	None Detected	15% Fiber Glass 10% Cellulose	75% Other	Black, White Non Fibrous Heterogeneous
71906225PLM_3					Teased, Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

William Howell (3)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

71906225

Client:	ABS ENVIRONMENTAL	***Instructions:***
Contact:	JEFF RIVERS	*Use Column "B" for your contact info*
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	*To See an Example Click the bottom Example Tab.*
Fax:	803-345-2823	
Email:	JRIVERS@ABSENV.COM	
Project:	4717 . Oxford	***Enter samples between "<<" and ">>" Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***
Client Notes:	72 HR TAT for TEM NOB	*Only Enter your data on the first sheet "Sheet1"*
P.O. #.	[Enter P.O. # Here]	*Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.*
Date Submitted:	3/6/2019 0:00	
Analysis:	EPA PLM 600	
TurnAroundTime:	24 HR TAT	

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717S-01	[Enter data of your choosing here]	Roof Shingles	[Enter data of your choosing here]
4717S-02	[Enter data of your choosing here]	Roof Shingles	[Enter data of your choosing here]
4717S-03	[Enter data of your choosing here]	Roof Shingles	TEM NOB If Negative
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By

3-7 10:30AM

Bulk Asbestos Analysis
by Transmission Electron Microscopy

Semi-Quantitative
Chatfield SOP 1988-02 Rev. 1

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4717 Oxford

Lab Order ID: 71906303

Analysis ID: 71906303_TB
Date Received: 3/8/2019
Date Reported: 3/13/2019

Sample ID	Description	Organic	Acid Sol.	Asbestos	LCL-UCL
Lab Sample ID	*Lab Notes*	*(Wt. %)*	*(Wt. %)*	*(Wt. %)*	*(Wt. %)*
4717S-03	**Roof shingles**	**38%**	**-**	**None Detected**	
71906303TBS_1					

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

Russell Shelton (1)

Analyst

Approved Signatory

~~71906225~~
71906303

Client:	ABS ENVIRONMENTAL
Contact:	JEFF RIVERS
Address:	1416 CHAPIN RD.-CHAPIN, SC
Phone:	803-260-2883
Fax:	803-345-2823
Email:	JRIVERS@ABSENV.COM
Project:	4717 Oxford
Client Notes:	72 HR TAT for TEM NOB
P.O. #:	[Enter P.O. # Here]
Date Submitted:	3/6/2019 0:00
Analysis:	EPA PLM 600
TurnAroundTime:	24 HR TAT

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4717S-01	[Enter data of your choosing here]	Roof Shingles	[Enter data of your choosing here]
4717S-02	[Enter data of your choosing here]	Roof Shingles	[Enter data of your choosing here]
4717S-03	[Enter data of your choosing here]	Roof Shingles	TEM NOB If Negative
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By

3-7 10:30AM

March 12, 2019

Asbestos Survey
For

4729 Oxford Road, Columbia, SC

Prepared for:	**City of Columbia** **Attn: David Hatcher** **1136 Washington Street** **Columbia, SC 29201**	**Phone: (803) 545-3444**
Prepared by:	**ABS Environmental, Inc.** **1416 Chapin Road** **Chapin, SC 29036** **ABS Job # 7800.19019**	**Phone: (803) 345-3833**

Inspection Performed by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Prepared by:	Jeff Rivers	SCDHEC # MP – 00166	Lic Exp Date 8/1/19
Report Reviewed by:	Lee Capell	SCDHEC # MP – 00072	Lic Exp Date 8/8/19

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1.0 EXECUTIVE SUMMARY

2.0 APPENDIX

- **A. Drawing**
- **B. Site Map**
- **C. Tables**
- **D. Laboratory Results**

1.0 EXECUTIVE SUMMARY

ABS Environmental, Inc. (ABS) was retained by the City of Columbia to perform an asbestos survey at 4729 Oxford Road in Columbia, SC. The primary objective of this survey was to identify, sample and physically assess suspect asbestos-containing building materials (ACBM) associated with the vacant residence.

The subject structure is a single-family residence built over a crawlspace. The roof is built in a gable configuration and is covered with shingles. The exterior is clad primarily with composite siding. Interior finishes include:

Ceilings: Spray-applied texture on sheetrock
Walls: Sheetrock
Floors: Wood throughout

The residence measures approximately 960 ft^2.

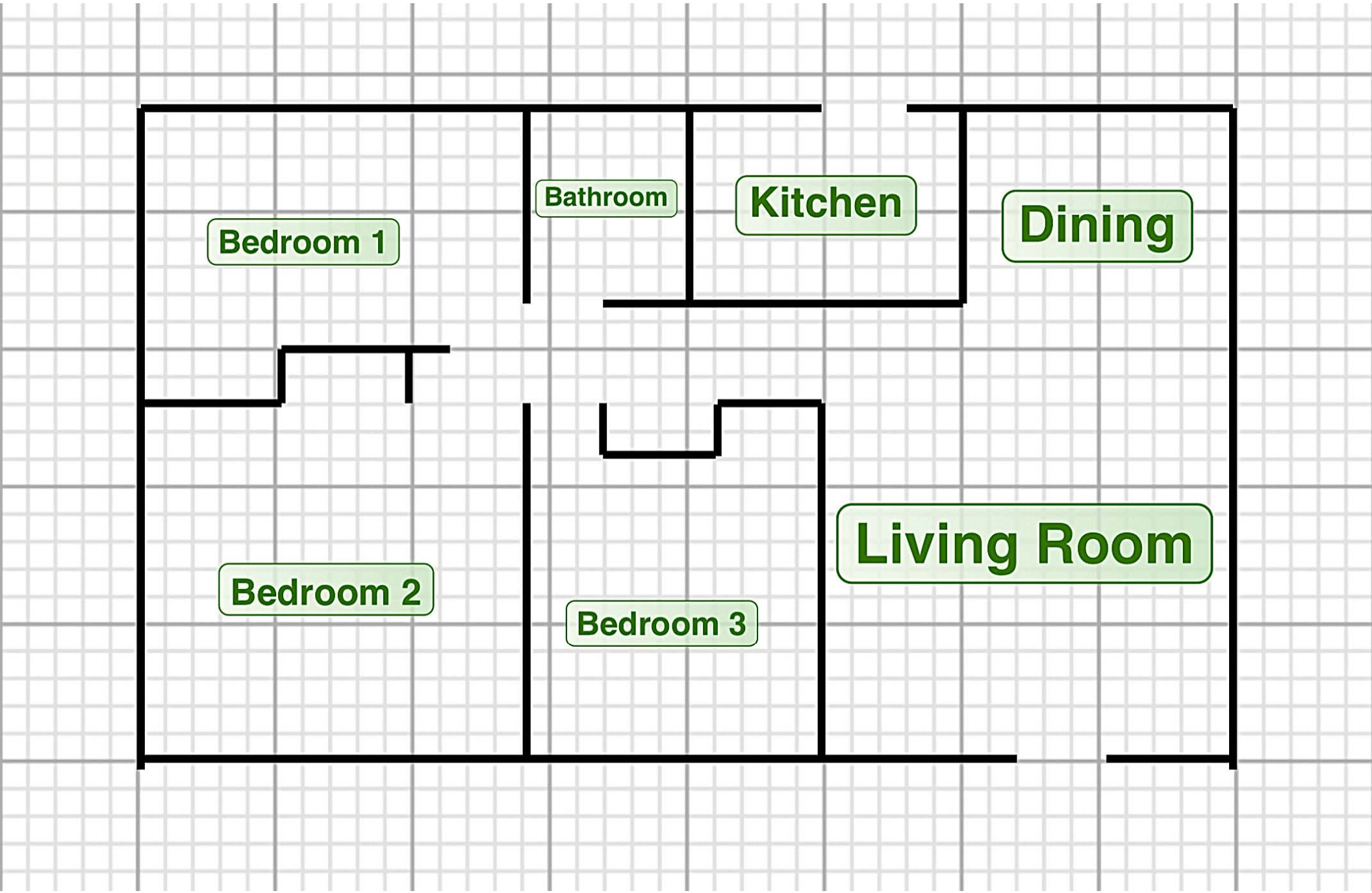
Twelve (12) suspect materials were identified, sampled and analyzed for the presence of asbestos. Samples were delivered by overnight courier service to SAI, Inc. for analysis using Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) to confirm negative PLM results for non-friable organically bound materials. As indicated by laboratory analysis, those materials containing asbestos > 1 % include approximately

- 960 ft^2 of joint compound and/or ceiling texture on the ceilings
- 1,440 ft^2 of joint compound on the walls
- 1,536 ft^2 of exterior siding
- 10 LF of chimney flashing

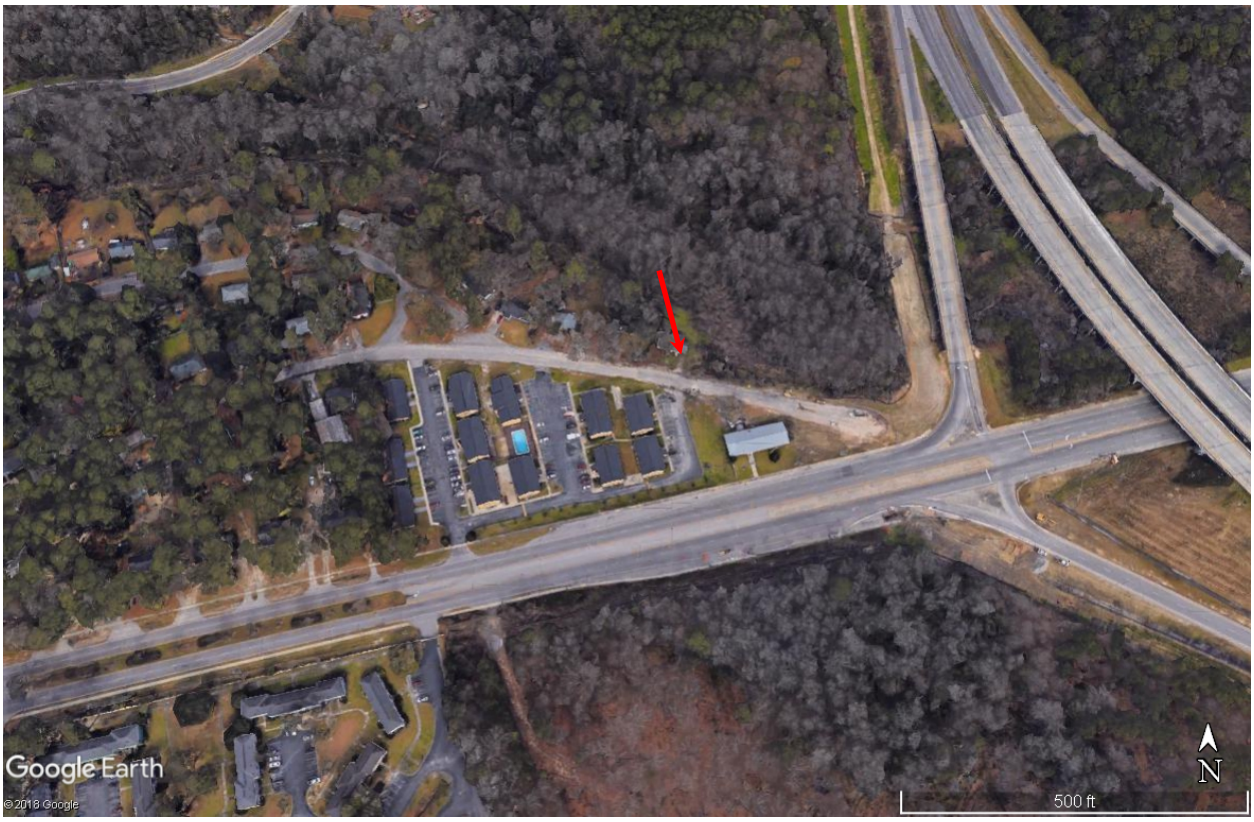
<u>Limitations</u>

This survey and report have been executed at the request of Mr. David Hatcher and City of Columbia and are intended solely for their use. All work related to this project has been conducted in keeping with accepted standards of environmental consulting as practiced in the State of South Carolina. No unnecessary destructive measures were undertaken during this survey. Additional suspect and/or asbestos containing materials may be present. If at any time during the course of renovation or demolition a suspect material is observed that is not identified in this report, stop work immediately until the material can be sampled and analyzed for the presence of asbestos. ***ABS*** has relied, in part, on information derived from secondary sources, and except as set forth herein, ***ABS*** has made no independent investigation as to the accuracy or completeness of the information derived from such secondary sources. No warranty is expressed or implied.

DRAWING


Bathroom
Kitchen
Dining
Bedroom 1
Living Room
Bedroom 2
Bedroom 3

SITE MAP



TABLES

Table #1
Asbestos Containing Building Material (ACBM)

Project Name: **4729 Oxford Road**
Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

* Assumed to Contain Asbestos > 1%

Observed ACBM		
Material	EPA AHERA Category	Quantity
Ceiling Texture	Surfacing	960 ft^2
Joint Compound: Ceilings	Surfacing	960 ft^2
Joint Compound: Walls	Surfacing	1,440 ft^2
Exterior Siding	Miscellaneous	1,536 ft^2
Chimney Flashing	Miscellaneous	10 LF

Table #2
Friable ACBM

Project Name: **4729 Oxford Road**
Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

* Assumed to Contain Asbestos > 1%

Friable ACBM	
Material	Quantity
Ceiling Texture	960 ft^2
Joint Compound: Ceilings	960 ft^2
Joint Compound: Walls	1,440 ft^2

Table #3
Non-Friable ACBM

Project Name: **4729 Oxford Road**
Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

* Assumed to Contain Asbestos > 1%

Non-Friable ACBM	
Material	Quantity
Exterior Siding	1,536 ft^2
Chimney Flashing	10 LF

Table #4
Asbestos - Suspect Material Data Sheet

Project Name: **4729 Oxford Road**

Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

P = Positive via TEM

N = Negative: does not meet definition of ACM

A = Assumed to be ACM; no samples collected

PTP = Previously tested Positive

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-01	Ceiling Texture	S	3	960 ft^2	F/G	PD	P			2
HM-02	Sheetrock	M	3	2,400 ft^2	F/G	PD	N			NA
HM-03	Joint Comp: Ceilings	S	5	960 ft^2	F/G	PD	P			2
	Joint Comp: Walls			1,440 ft^2	F/G	PD				
HM-04	Attic Insulation	T	3	960 ft^2	F/G	PD	N			NA
HM-05	Wire Wrap	M	3	12 LF	NF/G	PD	N	N		NA
HM-06	Exterior Caulk	M	3	2 doors	NF/G	PD	N	N		NA
HM-07	Exterior Siding	M	3	1,536 ft^2	NF/G	PD	P			2
HM-08	Roof Shingles	M	3	1,440 ft^2	NF/G	PD	N	N		NA
HM-09	Felt Paper under Roof Shingles	M	3	1,440 ft^2	NF/G	LPD	N	N		NA

Table #4
Asbestos - Suspect Material Data Sheet

Project Name: **4729 Oxford Road**

Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Asbestos Finding; **Asbestos Containing Material (ACM) contains > 1% asbestos by definition**

P = Positive via PLM

N = Negative: does not meet definition of ACM

PTP = Previously tested Positive

P = Positive via TEM

A = Assumed to be ACM; no samples collected

PTN = Previously tested Negative

Present Condition

F = Friable

NF= Non Friable

D = Damaged (Damage less than 10 distributed and less than 25 % localized)

G = Good (Very localized damage)

SD = Significantly Damaged (Damage equal to or greater than 10 % distributed/ 25 % localized)

Potential for Future Disturbance by Contact, Vibration or Air Erosion Mechanisms

LPD = Low Potential for Disturbance (All Three Mechanisms of Low Concern)

PD = Potential for Damage (Any One Mechanism of Moderate Concern)

PSD = Potential for Significant Damage (One Mechanism of High Concern or More Than One of Moderate Concern)

EPA AHERA Asbestos Category

T = Thermal System Insulation (Inhibits heat transfer or prohibits condensation)

S = Surfacing Material (Spray-applied or trowel applied)

M = Miscellaneous Materials (Refer to as "Other" materials by OSHA)

Hazard Ranking = 7 thru 1; (7 being the worst i.e. significantly damaged material)

Suspect Material #	Material Description	Category (S, T, M)	# Samples	Quantity	Present Condition	Disturbance Potential	P or N PLM	P or N TEM	P or N Point Count	Hazard Ranking
HM-10	Felt Paper behind Exterior Siding	M	3	1,536 ft^2	NF/G	LPD	N	N		NA
HM-11	Exterior Window Glazing	M	3	12 windows	NF/G	PD	N	N		NA
HM-12	Chimney Flashing	M	3	10 LF	NF/G	PD	N	P		2

Table #5
Asbestos - Bulk Sample Data Sheet

Project Name: **4729 Oxford Road**

Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
71904398PLM_1	4729-01	HM-01	Ceiling Texture	Kitchen	Chry	3%		
71904398PLM_2	4729-02			Hallway	Chry	3%		
71904398PLM_3	4729-03			Bathroom	Chry	3%		
71904398PLM_4	4729-04 - A	HM-02	Sheetrock	Dining Room		NAD		
71904398PLM_5	4729-05 - A			Kitchen		NAD		
71904398PLM_6	4729-06 - A			Bathroom		NAD		
71904398PLM_33	4729-04 - B	HM-03	Joint Compound	Dining Room	Chry	3%		
71904398PLM_34	4729-05 - B			Kitchen	Chry	3%		
71904398PLM_35	4729-06 - B			Bathroom	Chry	3%		
71904398PLM_7	4729-07			Living Room	Chry	3%		
71904398PLM_8	4729-08			Bedroom 31	Chry	3%		
71904398PLM_9	4729-09	HM-04	Attic Insulation			NAD		
71904398PLM_10	4729-10					NAD		
71904398PLM_11	4729-11					NAD		
71904398PLM_12	4729-12	HM-05	Wire Wrap	Hallway		NAD		
71904398PLM_13	4729-13					NAD		
71904538TBS_1	4729-14						NAD	
71904398PLM_15	4729-15	HM-06	Exterior Caulk			NAD		
71904398PLM_16	4729-16					NAD		
71904538TBS_2	4729-16						NAD	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile
Amos = Amosite Croc = Crocidilite Anth = Anthophylite

Table #5
Asbestos - Bulk Sample Data Sheet

Project Name: **4729 Oxford Road**

Project Address: 4729 Oxford Rd., Columbia, SC **Date:** 12-Mar-19

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via PLM

Positive; meets definition of Asbestos Containing Material (ACM) (i.e.>1%asbestos) via TEM

Assumed to contain Asbestos > 1%

*** Chry = Chrysotile Amos = Amosite Croc = Crocidolite Anth = Anthophylite NAD = No Asbestos Detected DNA = Did Not Analyze**

Laboratory Sample #	ABS Sample #	Suspect Material #	Material Description	Location	Type * Asbestos	Percent PLM	Percent TEM	Percent Point Count
71904398PLM_18	4729-18	HM-07	Exterior Siding		Chry	15%		
71904398PLM_19	4729-19				Chry	15%		
71904398PLM_20	4729-20				Chry	15%		
71904398PLM_21	4729-21	HM-08	Shingles	Roof		NAD		
71904398PLM_22	4729-22					NAD		
71904538TBS_3	4729-23						NAD	
71904398PLM_24	4729-24	HM-09	Felt Paper under Roof Shingles	Roof		NAD		
71904398PLM_25	4729-25					NAD		
71904538TBS_4	4729-26						NAD	
71904398PLM_27	4729-27	HM-10	Felt Paper behind Exterior Siding			NAD		
71904398PLM_28	4729-28					NAD		
71904538TBS_5	4729-29						NAD	
71904398PLM_30	4729-30	HM-11	Exterior Window Glazing			NAD		
71904398PLM_31	4729-31					NAD		
71904538TBS_6	4729-32						NAD	
71906228PLM_1	4729-33	HM-12	Chimney Flashing			NAD		
71906228PLM_2	4729-34					NAD		
1906302TBS_1	4729-35				Chry		9.9%	

* NAD = No Asbestos Detected DNA = Did Not Analyze Chry = Chrysotile
Amos = Amosite Croc = Crocidilite Anth = Anthophylite

LABORATORY RESULTS

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71904398
Analysis ID: 71904398_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-01 / *71904398PLM_1*	Ceiling Texture	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Teased
4729-02 / *71904398PLM_2*	Ceiling Texture	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Teased
4729-03 / *71904398PLM_3*	Ceiling Texture	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Teased
4729-04 - A / *71904398PLM_4*	Sheetrock/Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	Brown, White Non Fibrous Homogeneous Teased
4729-04 - B / *71904398PLM_33*	Sheetrock/Joint Compound *joint compound*	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Teased
4729-05 - A / *71904398PLM_5*	Sheetrock/Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	Brown, White Non Fibrous Homogeneous Teased
4729-05 - B / *71904398PLM_34*	Sheetrock/Joint Compound *joint compound*	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous Teased
4729-06 - A / *71904398PLM_6*	Sheetrock/Joint Compound *sheetrock*	**None Detected**	**10% Cellulose**	**90% Other**	Brown, White Non Fibrous Homogeneous Teased

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71904398
Analysis ID: 71904398_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-06 - B / *71904398PLM_35*	Sheetrock/Joint Compound / *joint compound*	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous / Teased
4729-07 / *71904398PLM_7*	Joint Compound	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous / Teased
4729-08 / *71904398PLM_8*	Joint Compound	**3% Chrysotile**		**97% Other**	Beige Non Fibrous Homogeneous / Teased
4729-09 / *71904398PLM_9*	Attic Insulation	**None Detected**	**95% Fiber Glass**	**5% Other**	Pink Fibrous Homogeneous / Teased
4729-10 / *71904398PLM_10*	Attic Insulation	**None Detected**	**95% Fiber Glass**	**5% Other**	Pink Fibrous Homogeneous / Teased
4729-11 / *71904398PLM_11*	Attic Insulation	**None Detected**	**95% Fiber Glass**	**5% Other**	Pink Fibrous Homogeneous / Teased
4729-12 / *71904398PLM_12*	Wire Insulation	**None Detected**	**40% Cellulose**	**60% Other**	Brown, Black Fibrous Heterogeneous / Teased, Dissolved
4729-13 / *71904398PLM_13*	Wire Insulation	**None Detected**	**40% Cellulose**	**60% Other**	Brown, Black Fibrous Heterogeneous / Teased, Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71904398
Analysis ID: 71904398_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-14 / *71904398PLM_14*	Wire Insulation / *TEM*	**Not Analyzed**			
4729-15 / *71904398PLM_15*	Exterior Caulk	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
4729-16 / *71904398PLM_16*	Exterior Caulk	**None Detected**		**100% Other**	White Non Fibrous Homogeneous Dissolved
4729-17 / *71904398PLM_17*	Exterior Caulk / *TEM*	**Not Analyzed**			
4729-18 / *71904398PLM_18*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4729-19 / *71904398PLM_19*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4729-20 / *71904398PLM_20*	Exterior Siding	**15% Chrysotile**		**85% Other**	Gray Non Fibrous Homogeneous Crushed
4729-21 / *71904398PLM_21*	Roof Shingles	**None Detected**	**10% Fiber Glass**	**90% Other**	Black Non Fibrous Homogeneous Dissolved

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommend that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government. Analytical uncertainty available upon request. Scientific Analytical Institute participates in the NVLAP Proficiency Testing program. Unless otherwise noted blank sample correction was not performed. Estimated MDL is 0.1%.

Byron Stroble (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71904398
Analysis ID: 71904398_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-22	Roof Shingles	None Detected	10% Fiber Glass	90% Other	Black Non Fibrous Homogeneous
71904398PLM_22					Dissolved
4729-23	Roof Shingles	Not Analyzed			
71904398PLM_23	*TEM*				
4729-24	Felt Paper under Roof Shingles	None Detected	20% Cellulose	80% Other	Gray, Black Non Fibrous Homogeneous
71904398PLM_24					Dissolved
4729-25	Felt Paper under Roof Shingles	None Detected	20% Cellulose	80% Other	Gray, Black Non Fibrous Homogeneous
71904398PLM_25					Dissolved
4729-26	Felt Paper under Roof Shingles	Not Analyzed			
71904398PLM_26	*TEM*				
4729-27	Felt Paper behind exterior siding	None Detected	20% Cellulose	80% Other	Gray, Black Non Fibrous Homogeneous
71904398PLM_27					Dissolved
4729-28	Felt Paper behind exterior siding	None Detected	20% Cellulose	80% Other	Gray, Black Non Fibrous Homogeneous
71904398PLM_28					Dissolved
4729-29	Felt Paper behind exterior siding	Not Analyzed			
71904398PLM_29	*TEM*				

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Byron Stroble (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71904398
Analysis ID: 71904398_PLM
Date Received: 2/19/2019
Date Reported: 2/20/2019

Project: 4729 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-30	Exterior Window Glazing	None Detected		100% Other	Gray Non Fibrous Homogeneous
71904398PLM_30					Ashed
4729-31	Exterior Window Glazing	None Detected		100% Other	Gray Non Fibrous Homogeneous
71904398PLM_31					Ashed
4729-32	Exterior Window Glazing	Not Analyzed			
71904398PLM_32	*TEM*				

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Byron Stroble (35)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

71904398

Client:	ABS ENVIRONMENTAL	***Instructions:***
Contact:	JEFF RIVERS	*Use Column "B" for your contact info*
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	*To See an Example Click the bottom Example Tab.*
Fax:	803-345-2823	
Email:	JRIVERS@ABSENV.COM	
		Enter samples between "<<" and ">>"
Project:	4729 Oxford	***Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.***
Client Notes:	72 HR TEM NOB TAT	*Only Enter your data on the first sheet "Sheet1"*
P.O. #.	[Enter P.O. # Here]	*Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.*
Date Submitted:	2/18/2019 0:00	
Analysis:	EPA PLM 600	
TurnAroundTime:	24 HR TAT	

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4729-01	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-02	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-03	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-04	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-05	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-06	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-07	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4729-08	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4729-09	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-10	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-11	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-12		Wire Insulation	
4729-13		Wire Insulation	
4729-14		Wire Insulation	
4729-15		Exterior Caulk	
4729-16		Exterior Caulk	
4729-17		Exterior Caulk	TEM NOB If Negative
4729-18		Exterior Siding	

Accepted ☑

Rejected ☐

Relinquished By

Received By

2-19 10:30am

71904398

4729-19	Exterior Siding	
4729-20	Exterior Siding	
4729-21	Roof Shingles	
4729-22	Roof Shingles	
4729-23	Roof Shingles	TEM NOB If Negative
4729-24	Felt Paper under Roof Shingles	
4729-25	Felt Paper under Roof Shingles	
4729-26	Felt Paper under Roof Shingles	TEM NOB If Negative
4729-27	Felt Paper behind exterior siding	
4729-28	Felt Paper behind exterior siding	
4729-29	Felt Paper behind exterior siding	TEM NOB If Negative
4729-30	Exterior Window Glazing	
4729-31	Exterior Window Glazing	
4729-32	Exterior Window Glazing	TEM NOB If Negative

>>

Relinquished By

Received By

Bulk Asbestos Analysis
by Transmission Electron Microscopy

Semi-Quantitative
Chatfield SOP 1988-02 Rev. 1

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71904538
Analysis ID: 71904538_TB
Date Received: 2/20/2019
Date Reported: 2/25/2019

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Organic (Wt. %)	Acid Sol. (Wt. %)	Asbestos (Wt. %)		LCL-UCL (Wt. %)
4729-14 / *71904538TBS_1*	Wire Insulation	77%	-	None Detected		
4729-17 / *71904538TBS_2*	Exterior Caulk	32%	-	None Detected		
4729-23 / *71904538TBS_3*	Roof Shingles	23%	-	None Detected		
4729-26 / *71904538TBS_4*	Felt Paper under Roof Shingles	71%	-	None Detected		
4729-29 / *71904538TBS_5*	Felt Paper behind exterior siding	70.%	-	None Detected		
4729-32 / *71904538TBS_6*	Exterior Window Glazing	17%	82%	0.0084 %	Chrysotile	0.0076% - 0.0093%

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

Russell Shelton (6)

Analyst

Approved Signatory

~~71904398~~
71904538

Client:	ABS ENVIRONMENTAL
Contact:	JEFF RIVERS
Address:	1416 CHAPIN RD.-CHAPIN, SC
Phone:	803-260-2883
Fax:	803-345-2823
Email:	JRIVERS@ABSENV.COM
Project:	4729 Oxford
Client Notes:	72 HR TEM NOB TAT
P.O. #:	[Enter P.O. # Here]
Date Submitted:	2/18/2019 0:00
Analysis:	EPA PLM 600
TurnAroundTime:	24 HR TAT

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4729-01	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-02	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-03	[Enter data of your choosing here]	Ceiling Texture	[Enter data of your choosing here]
4729-04	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-05	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-06	[Enter data of your choosing here]	Sheetrock/Joint Compound	[Enter data of your choosing here]
4729-07	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4729-08	[Enter data of your choosing here]	Joint Compound	[Enter data of your choosing here]
4729-09	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-10	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-11	[Enter data of your choosing here]	Attic Insulation	[Enter data of your choosing here]
4729-12		Wire Insulation	
4729-13		Wire Insulation	
4729-14		Wire Insulation	
4729-15		Exterior Caulk	
4729-16		Exterior Caulk	
4729-17		Exterior Caulk	TEM NOB If Negative
4729-18		Exterior Siding	

Accepted ☑

Rejected ☐

Relinquished By

Received By

2-19 10:30am

~~71904398~~
71904538

4729-19	Exterior Siding	
4729-20	Exterior Siding	
4729-21	Roof Shingles	
4729-22	Roof Shingles	
4729-23	Roof Shingles	TEM NOB If Negative
4729-24	Felt Paper under Roof Shingles	
4729-25	Felt Paper under Roof Shingles	
4729-26	Felt Paper under Roof Shingles	TEM NOB If Negative
4729-27	Felt Paper behind exterior siding	
4729-28	Felt Paper behind exterior siding	
4729-29	Felt Paper behind exterior siding	TEM NOB If Negative
4729-30	Exterior Window Glazing	
4729-31	Exterior Window Glazing	
4729-32	Exterior Window Glazing	TEM NOB If Negative

>>

Relinquished By

Received By

Bulk Asbestos Analysis

By Polarized Light Microscopy
EPA Method: 600/R-93/116 and 40 CFR, Part 763, Subpart E, App.E

NVLAP Lab Code: 200664-0

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Lab Order ID: 71906228
Analysis ID: 71906228_PLM
Date Received: 3/7/2019
Date Reported: 3/7/2019

Project: 4729 Oxford

Sample ID / *Lab Sample ID*	Description / *Lab Notes*	Asbestos	Fibrous Components	Non-Fibrous Components	Attributes / Treatment
4729-33	Chimney Flashing	None Detected	10% Wollastonite	90% Other	Black Non Fibrous Homogeneous
71906228PLM_1					Dissolved
4729-34	Chimney Flashing	None Detected	10% Wollastonite	90% Other	Black Non Fibrous Homogeneous
71906228PLM_2					Dissolved
4729-35	Chimney Flashing	None Detected	10% Wollastonite	90% Other	Black Non Fibrous Homogeneous
71906228PLM_3					Dissolved

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William Howell (3)

Analyst

Approved Signatory

P-F-002 r15 1/16/2021

71906228

Client:	ABS ENVIRONMENTAL
Contact:	JEFF RIVERS
Address:	1416 CHAPIN RD.-CHAPIN, SC
Phone:	803-260-2883
Fax:	803-345-2823
Email:	JRIVERS@ABSENV.COM
Project:	4729 Oxford
Client Notes:	72 HR TAT for TEM NOB
P.O. #:	[Enter P.O. # Here]
Date Submitted:	3/6/2019 0:00
Analysis:	EPA PLM 600
TurnAroundTime:	24 HR TAT

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

Scientific Analytical Institute

4604 Dundas Drive
Greensboro, NC 27407
Phone: 336.292.3888
Fax: 336.292.3313
Email: lab@sailab.com

Sample Number	Data 1	Sample Description	Data 2
<<			
4729-33	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4729-34	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4729-35	[Enter data of your choosing here]	Chimney Flashing	TEM NOB If Negative
>>			

Accepted ☑

Rejected ☐

Relinquished By

Received By

3-7 10:30AM

Bulk Asbestos Analysis
by Transmission Electron Microscopy

Semi-Quantitative
Chatfield SOP 1988-02 Rev. 1

Customer: ABS Environmental Inc.
1416 Chapin Rd
Chapin, SC 29036

Attn: Jeff Rivers

Project: 4729 Oxford

Lab Order ID: 71906302

Analysis ID: 71906302_TB
Date Received: 3/8/2019
Date Reported: 3/13/2019

Sample ID	Description	Organic	Acid Sol.	Asbestos		LCL-UCL
Lab Sample ID	*Lab Notes*	*(Wt. %)*	*(Wt. %)*	*(Wt. %)*		*(Wt. %)*
4729-35	**Chimney flashing**	**51%**	**-**	**9.9 %**	**Chrysotile**	**8.9% - 11%**
71906302TBS_1						

Disclaimer: This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAI. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. government.

Russell Shelton (1)

Analyst

Approved Signatory

~~71906228~~
71906302

Client:	ABS ENVIRONMENTAL	
Contact:	JEFF RIVERS	
Address:	1416 CHAPIN RD.-CHAPIN, SC	
Phone:	803-260-2883	
Fax:	803-345-2823	
Email:	JRIVERS@ABSENV.COM	
Project:	4729 Oxford	
Client Notes:	72 HR TAT for TEM NOB	
P.O. #:	[Enter P.O. # Here]	
Date Submitted:	3/6/2019 0:00	
Analysis:	EPA PLM 600	
TurnAroundTime:	24 HR TAT	

Instructions:
Use Column "B" for your contact info

To See an Example Click the bottom Example Tab.

Enter samples between "<<" and ">>"
Begin Samples with a "<< "above the first sample and end with a ">>" below the last sample.
Only Enter your data on the first sheet "Sheet1"

Note: Data 1 and Data 2 are optional fields that do not show up on the official report, however they will be included in the electronic data returned to you to facilitate your reintegration of the report data.

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4604 Dundas Drive
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<<

4729-33	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4729-34	[Enter data of your choosing here]	Chimney Flashing	[Enter data of your choosing here]
4729-35	[Enter data of your choosing here]	Chimney Flashing	TEM NOB If Negative

>>

Accepted ☑

Rejected ☐

Relinquished By

Received By

3-7 10:30AM