

# **Asbestos & Lead Based Paint Assessment**

City of Spartanburg 645 Isom Street Spartanburg, South Carolina 29303

## Prepared for:

The City of Spartanburg 440 South Church St., Suite B Spartanburg, South Carolina 29306

### Prepared by:

Apex Environmental Management, Inc. 7 Winchester Court Mauldin, South Carolina 29662

Project Number: 0123-01

January 16, 2023





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www.apex-ehs.com

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#### **Apex Project Number 0123-01**

January 16, 2023

Mr. Martin Livingston City of Spartanburg 440 South Church Street, Suite B Spartanburg, SC 29306

Reference: Asbestos and Lead-Based Paint Assessment Services

645 Isom Street

Spartanburg, South Carolina 29303

Dear Mr. Livingston:

Apex Environmental Management, Inc. (Apex) is pleased to provide the results of our assessment services for the referenced property.

This report and the associated attachments summarize our evaluation of the conditions observed at the project site. The findings presented by Apex are based upon sampling performed in the subject building. There is a chance that undetected ACM may exist in the building between walls or in other areas that would only be exposed during demolition or structural renovations. Should material be discovered that could potentially contain asbestos during the demolition process, additional samples of the material should be collected by a licensed asbestos inspector and submitted to an accredited laboratory for analytical interpretation. Our recommendations are based on the guidelines presented in EPA and/or OSHA regulations.

Please note that this document is not a specification for asbestos removal. It does not contain means and methods for abatement. Quantities are estimates and contractors must verify amounts prior to bidding or removal. If you are planning an abatement project, please contact Apex to discuss the requirements. Use of this document without the express written consent of Apex is at the sole risk of the user and or/abatement contractor.

The conclusions and/or recommendations contained in this report are based on our understanding of the applicable standards at the time this report was prepared. No warranty, expressed or implied, is made. If you have any questions please feel free to contact us at (864) 404-3210.

Respectfully submitted,

APEX ENVIRONMENTAL MANAGEMENT, INC.

Tom Oliver Vice President

**Appendices** 

#### ASBESTOS AND LEAD BASED PAINT ASSESSMENT

### CITY OF SPARTANBURG 645 ISOM STREET SPARTANBURG, SOUTH CAROLINA 29303

#### **APEX PROJECT NO. 0123-01**

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# **SECTION I**

**Asbestos & Lead Evaluation Report** 

#### ASBESTOS EVALUATION REPORT **APEX PROJECT NUMBER: 0123-01**

Date: 1/16/2023 1 of 4 Page Number:

Client: City of Spartanburg Client Contact: Mr. Martin Livingston

Client 440 South Church Street Client Phone (864) 580-5323

Spartanburg, SC 29306

Spartanburg, SC 29306

Assessment

Address:

Address: Number: Suite B

7-08-15-111.00 Asbestos Evaluation and Parcel ID No.: Project:

Lead Based Paint

Property 645 Isom Street

Assessor: Tom Oliver Date of 1/5/2022 Assessment:

Company: Apex Environmental

Phone Management (864) 404-3210 7 Winchester Court Number:

Age of

Mauldin, SC 29662 Purpose of Demolition Approximately 120

Structure: Assessment: years

Building Residential Number of 2 Type: Stories:

Foundation: Crawlspace Approximate 1,600 SF

Square Footage

#### **EXTERIOR BUILDING MATERIALS** INTERIOR BUILDING MATERIALS

- Pitched wooden roof with shingles & felt.
- Transite siding over wooden siding.
- Wooden windows with glazing & caulk.
- The doors & a portion of the windows are missing.
- 1 brick chimney with tar.
- Fire damage exists throughout the exterior.
- Metal shed with no suspect ACM identified.
- 1 metal carport/canopy with hard white caulk on the side of the roof.

- Interior building materials were not assessed due to fire & structural damage throughout the residence.
- Due to safety concerns no asbestos samples were collected from within the residence.
- The residence and associated debris piles are presumed to be positive for ACM (1,600 SF).

City of Spartanburg 645 Isom Street Apex Project No. 0123-01 January 16, 2023

#### **SCOPE OF THE SURVEY**

The objectives of the asbestos and lead assessment included the following:

- Identification of suspect asbestos-containing material (ACM) and lead based paints (LBP) in readily observable locations. Limited demolition of building finishes was conducted.
- Asbestos survey with sample collection by a South Carolina accredited inspector.
- Suspect ACM analysis by polarized light microscopy (PLM) utilizing EMSL Analytical, Inc. (EMSL) as an NVLAP certified laboratory, their accreditation number is 200841-0.
- Transmission electron microscopy (TEM) analysis of non-friable organically bound materials suspected to contain asbestos and testing negatively by PLM analysis.
- Lead inspection by a lead inspector certified by the Environmental Protection Agency and licensed to conduct LBP surveys in South Carolina.
- In situ analysis of suspected lead based paints by X-ray fluorescence (XRF).
- Presenting the results in a report identifying confirmed ACMs and LBPs.

#### **METHODS**

#### Asbestos Containing Materials

In order to determine if the suspect materials observed during the visual survey contained asbestos, representative bulk samples were collected and placed in sealed packages. Three (3) bulk samples were collected during the survey and submitted to EMSL in Pineville, North Carolina for analysis using the EPA recommended method of Polarized Light Microscopy (PLM) coupled with dispersion staining (Method No. EPA 600/M4-82-020, Dec. 1982). EMSL participates in the National Voluntary Laboratory Accreditation Program (NVLAP). Their NVLAP accreditation number is 200841-0. EPA regulations require that multiple samples of each homogeneous material be collected for laboratory analysis. Two (2) samples were analyzed due to layering by PLM and positive stop methods. In accordance with South Carolina Regulation 61-86.1, non-friable organically bound materials that are reported to be non-asbestos containing by PLM analysis must also be analyzed by Transmission Electron Microscopy (TEM). One (1) sample was analyzed using TEM.

#### Lead-Based Paint

Lead painted surfaces were analyzed in place using X-ray fluorescence. Painted surfaces were selected based on color of topcoat, underlying layers and substrate on which it was painted.

#### **RESULTS**

#### Asbestos Results

The EPA defines an asbestos-containing material (ACM) as a material containing more than 1% asbestos. OSHA defines ACM as a material containing detectable amounts of asbestos. A specific *PLM* and *TEM Data Table* is located in Appendix II of this report and identifies positive materials and designates approximate quantities. Provided below is a general discussion of the asbestos containing materials presumed to be positive in the residence.

At the time of the assessment, the residence was found to have fire and structural damage throughout the interiors and exteriors. Safety concerns while performing sampling were addressed and no samples were collected from the residence during the assessment.

City of Spartanburg 645 Isom Street Apex Project No. 0123-01 January 16, 2023

Subsequently, the building materials and finishes from the residence should be presumed to be ACM. Apex recommends that the residence be demolished in place and materials be treated and disposed of as regulated asbestos containing materials (RACM).

The exterior carport/canopy and metal shed were fully assessed and no asbestos containing materials were identified.

Suspect asbestos containing materials that were presumed to be asbestos containing include:

Residence & associated debris – 1,600 SF

#### Lead Based Paint

OSHA does not recognize a threshold level of lead for definition purposes, only the presence or absence of lead. The current OSHA regulations recognize an airborne action level of thirty micrograms per cubic meter (30  $\mu$ g/m³) during an eight-hour workday and a permissible exposure level of fifty micrograms per cubic meter (50  $\mu$ g/m³) for employees.

Currently, HUD and the EPA define LBP as paint containing in excess of, or equal to, 1.0 mg/cm<sup>2</sup>. XRF LBP Data Sheets providing XRF results for testing combinations can be found in the Appendices at the conclusion of this report.

Several surfaces in the building tested positive for lead in excess of the regulatory definition:

#### Exterior

- White wooden siding beneath transite.
- White wooden windows and associated casings & sill.
- · Gray wooden soffits and fascia's.
- White wooden door casings.
- Black wooden front porch ceiling.

#### Interior

Interior surfaces were not assessed due to fire & structural damage to the residence.

#### RECOMMENDATIONS AND DISCUSSION

#### Asbestos Containing Materials

If the above referenced asbestos materials are to be disturbed by renovations or demolition, the asbestos must be removed in accordance with EPA, State of South Carolina and OSHA asbestos regulations. South Carolina, Department of Health and Environmental Control (DHEC) has specific regulations that must be adhered to during asbestos removal/abatement projects. APEX recommends the following:

- 1. No asbestos was identified within the exterior metal shed and carport/canopy; therefore, no recommendations are warranted at this time.
- 2. Demolish the residence with presumed ACM in place and dispose of the waste stream as friable Regulated Asbestos Containing Materials (RACM) and delivered to an asbestos approved hazardous waste landfill for disposal.

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- 3. Perimeter asbestos air monitoring should be performed during abatement by demolition activities and a visual clearance at the conclusion of the project.
- 4. Follow applicable asbestos regulations during renovation or demolition of the structure. You should be aware that stringent requirements are imposed upon anyone renovating or demolishing a structure in which ACM will be disturbed. This work must be performed in accordance with OSHA asbestos regulations, 29 CFR 1910 & 1926, and NESHAP asbestos regulations 40 CFR 61, subpart M. South Carolina regulations require the accreditation of personnel who work in the asbestos field and notification and permitting fees for asbestos removal projects. There is a 10 working day notification period required prior to abatement of asbestos in a facility. Failure to take proper precautions and actions to protect human health and the environment can result in penalties, danger to personnel, and construction delays.

#### Lead-Based Paint

Changes to state and federal regulations have changed the disposal options for LBP waste and LBP residue. LBP waste is defined as material such as wood, brick, metal, etc. that is coated with LBP. LBP residue is defined as residue that is generated from the removal (scraped, chipped, sandblasted, chemical means, etc.) of LBP from a structure. The regulations allow LBP waste from residential and commercial structures to be disposed of in Class 2 (construction and demolition debris) and Class 3 (municipal solid waste or industrial) landfills in South Carolina. The management of LBP residue is based on the source and lead concentration characterized by Toxic Characteristic Leaching Procedures (TCLP) to determine if the waste is classified as hazardous or non-hazardous. LBP residues that have TCLP sample results less than 5 milligrams per liter (mg/L) lead may be disposed of in a Class 3 landfill and is considered to be non-hazardous. LBP residues that have TCLP sample results equal to or greater than 5 mg/L lead should be disposed of in a Subtitle C landfill and is considered to be hazardous. However, the landfills should be contacted to determine their specific disposal requirements.

Occupational Safety and Health Administration Lead Regulations apply to actions initiated on lead containing materials. This regulation applies to lead concentrations greater than the analytical limit of detection. This regulation sets exposure levels on airborne lead and does not reference the percent lead in paint. Therefore, initial personal air monitoring should be conducted on workers performing work on surfaces which have a lead concentration of 0.1 mg/ cm² or above to satisfy the OSHA requirements. If a baseline exposure lower than the OSHA Action Level of 30 micrograms per cubic meter ( $\mu$ g/m³) is established, personal air monitoring may be terminated. The full OSHA lead standard should be referenced for compliance.

A copy of this report must be submitted to SCDHEC at least ten (10) working days prior to demolition when applying for a demolition permit.

# SECTION II Asbestos & LBP Data Tables

# ASBESTOS SURVEY FIELD DATA SHEET PLM & TEM ANALYSIS

Project Name: COS 645 Isom Street ACM/LBP Sampled By: Tom Oliver

Project Location: 645 Isom Street, Spartanburg, SC 29303 Project Manager: Tom Oliver

Project Number: 0123-01 Date: 1/5/2023

Sample No.	Location	Sample Description	Analytical Results	Friable/Non Friable	Condition	Quantity
1	Exterior Carport/Canopy		PLM - NAD			
2		White hard caulk	FLIVI - IVAD	Non-Friable	Good	15 LF
3	Carpora Carropy		TEM - NAD	- NAD		
Assumed	House/debris piles	House/debris piles	Assumed	Friable	Significantly Damaged	1,600 SF

**Bold = Positive For Asbestos** SF = Square Feet Chry = Chrysotile

# FIELD DATA SHEET XRF LBP ANALYSIS

Project Name: COS 645 Isom Street ACM/LBP Sampled By: Tom Oliver

Project Location: 645 Isom Street, Spartanburg, SC 29303 Project Manager: Tom Oliver

Project Number: 0123-01 Date: 1/5/2023

Sample No.	Sample Location	Component	Color	Substrate	Analytical Result (mg/m³)
1				184.00/PASS	
2		Standardization Calibration			1.21
3		Calibration			1.18
4		Calibration			1.20
5	House Exterior	Siding	White	Transite	0.00
6	House Exterior	Siding under transite	White	Wood	>5.00
7	House Exterior	Window	White	Wood	4.49
8	House Exterior	Window casing	White	Wood	4.22
9	House Exterior	Window sill	White	Wood	4.79
10	House Exterior	Soffit	Gray	Wood	3.65
11	House Exterior	Fascia	Gray	Wood	2.19
12	House Front Porch Ext.	Column	White	Wood	0.05
13	House Front Porch Ext.	Hand rail	Black	Metal	0.00
14	House Front Porch Ext.	Porch floor	Gray	Wood	0.06
15	House Front Porch Ext.	Hand rail	White	Wood	0.00
16	House Front Porch Ext.	Porch ceiling	Black	Wood	4.02
17	House Front Porch Ext.	Door casing	White	Wood	1.39
18	House Front Porch Ext.	Awning	White	Metal	0.00
19	House Exterior	Foundation	Silver	CMU Block	0.06
20	Carport/Canopy	Roof	White	Metal	0.00
21 Carport/Canopy		Column	Black	Metal	0.05
22	Exterior Shed	Wall	White	Metal	0.01
23		1.26			
24	Calibration				1.21
25	Calibration				1.18

Bold = LBP

# **SECTION III**

Laboratory Analytical Results & Chain of Custody



EMSL Order: 412300288 Customer ID: AXEM25

Fax:

**Customer PO:** 

Project ID: City of Spartanburg

Attention: Tom Oliver Phone: (864) 640-5127

Apex Environmental Management

7 Winchester Court Received Date: 01/09/2023 9:30 AM

Mauldin, SC 29662 Analysis Date: 01/11/2023

Collected Date: 01/05/2023

Project: 0123-01 COS 645 Isom Street ACM/LBP (City of Spartanburg)

### Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

		Non-Asbestos			<u>Asbestos</u>	
Sample	Description	Appearance	% Fibrous	% Non-Fibrous	% Type	
1	Exterior	Gray/White	2% Fibrous (Other)	98% Non-fibrous (Other)	None Detected	
	Carport/Canopy Roof	Non-Fibrous				
412300288-0001	- White Hard Caulk	Homogeneous				
2	Exterior	Gray/White	3% Fibrous (Other)	10% Ca Carbonate	None Detected	
	Carport/Canopy Roof	Non-Fibrous		87% Non-fibrous (Other)		
412300288-0002	- White Hard Caulk	Homogeneous				

Analyst(s)

Brant Alyea (1) Kelsie Dwyer (1) Lee Plumley, Laboratory Manager or Other Approved Signatory

Evan L Plumber

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. 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. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. 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 must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-friable organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC NVLAP Lab Code 200841-0, VA 3333 00312

Initial report from: 01/12/2023 08:34:41



EMSL Order: 412300288 Customer ID: AXEM25

**Customer PO:** 

Project ID: City of Spartanburg

Attention: Tom Oliver Phone: (864) 640-5127

Apex Environmental Management Fax:

7 Winchester Court Received Date: 01/09/2023 9:30 AM

Mauldin, SC 29662 Analysis Date: 01/13/2023 Collected Date: 01/05/2023

Project: 0123-01 COS 645 Isom Street ACM/LBP (City of Spartanburg)

# 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
3 412300288-0003	Exterior Carport/Canopy Roof - White Hard Caulk	Gray Non-Fibrous Homogeneous	98.0 Other	2.0 Fibrous_Other	No Asbestos Detected

Analyst(s)

Derrick Young (1)

Lee Plumley, Laboratory Manager or other approved signatory

Evan L Plumber

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. 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. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. EMSL recommends that samples reported as none detected or <1% undergo additional analysis via PLM to avoid the possibility of false negatives.

Samples analyzed by EMSL Analytical, Inc. Pineville, NC

Initial report from: 01/16/2023 08:22:11

# OrderID: 412300288

EMSL ANALYTICAL, INC.

# Asbestos Bulk Building Materials - Chain of Custody 10801 Southern Loop Blvd

LIVIOL Allarytical, Ilic.

EMSL Order Number / Lab Use Only 412300288

Pineville, NC 28134 PHONE: (704) 525-2205 EMAIL: charlottelab@EMSL.com

er Information	Contact Name: To	oex Environmental I om Oliver Winchester Court auldin	Management, Inc.  SC 29662 Country. US	Billing ID:  Company Name: Apex Environmental Management, Inc.  Billing Contact: Tom Oliver  Street Address: 7 Winchester Court  City, State, Zip: Mauldin SC Country: US  Phone: 8644043210		
Custo	Phone: 86	644043210	•	Phone: 8644043210  Email(s) for Invoice:		
Proje Nam EMS (if spp	ect 0123-1 e/No: 0123-1 IL LIMS Project ID: licable, EMSL will provide)	liver@apex-ehs.cor  01 COS 645 Isom S  0 Oliver  1 6 Hour 24 Ho Please call ahead for large  PLM - Bulk (reporting	Sampled By Signature  Sampled By Signature  Purn-Around  Furn-Around  Turn-Around  Turn-Around  Turn-Around  Turn-Around  Turn-Around  Test Se	Email(s) for Invoice:   Information		
	✓ PLM EPA 600/R-93/116 (<1%)					
	Sample Number	HA Number	San	mple Location Material Description		
1		PLM	Exterior carpor			
2		PLM	Exterior carpor			
3		TEM	Exterior carpor	rt/canopy roof White Hard Caulk		
			·			
C	Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)  City of Spartanburg					
Relin	nod of Shipment: nquished by: nquished by:		Date/Time:	Sample Condition Upon Receipt:  Date/Time   9/23    Received by:   1965 4550 8856   Date/Time   930Am  Date/		

**SECTION IV** 

Photographic Log



Photo 1 – 645 Isom Street located in Spartanburg, South Carolina 29303



Photo 2 – Exterior carport/canopy with hard white caulk on the front side of the roof



Photo 3 – Exterior carport/canopy with hard white caulk on the front side of the roof



Photo 4 – Exterior metal shed with no suspect ACM identified



Photo 5 – Typical view of fire damage



Photo 6 – Typical view of fire damage



Photo 7 – Typical view of fire damage



Photo 8 – Typical view of fire damage

# **SECTION V**

**SC DHEC Asbestos Inspector License** 

# **SCDHEC ISSUED**

Asbestos ID Card

#### **Thomas H Oliver**



AIRSAMPLER CONSULTBI AS-00202 BI-00680 Expiration Date: 08/04/23 12/01/23

This card is nontransferable and considered invalid if loaned or given to another person for identification. This card will also be invalid if altered or defaced. This card is property of SCDHEC. It must be returned to the department if the holder's accreditation is revoked or if this card is invalidated. Any person performing regulated asbestos activities without current accreditation shall be subject to legal sanction. This card must be returned upon expiration and/or issuance of a new card.

YOU MUST HAVE THIS IDENTIFICATION CARD WITH YOU ON THE JOB.

For information of corrections contact SCDHEC - Asbestos Section 2600 Bull Street Columbia, SC 29201 (803) 898-4289