



**Asbestos & Lead-Based Paint  
Assessment  
Bear Creek Bridge  
Route S-11-119  
Structure No. 1170011900100  
Cherokee County, South Carolina  
S&ME Project No. 1361-20-048**

**PREPARED FOR:**

**South Carolina Department of Transportation  
955 Park Street, Room 421  
Columbia, South Carolina 29201**

**INSPECTION PERFORMED BY:**

**Travis Knight & Bobby McAllister  
SCDHEC Lic. BI-00885 & BI-01429  
Inspection Dates: October 14, 2020**

- ☒ **Asbestos was NOT found**
- ☐ **Asbestos WAS found**
  
- ☐ **Lead-Based Paint was NOT found**
- ☒ **Lead-Based Paint WAS found**

**Report Expiration: October 2023**

**PREPARED BY:**

**S&ME, Inc.  
134 Suber Road  
Columbia, SC 29210  
(803) 561-9024**

**December 16, 2020**



December 16, 2020

South Carolina Department of Transportation  
955 Park Street, Room 421  
Columbia, South Carolina 29201

Attention: Mr. Trapp Harris, PE, DBIA  
[HarrisMD@scdot.org](mailto:HarrisMD@scdot.org)

Reference: **Asbestos & Lead-Based Paint Assessment**  
**Bear Creek Bridge**  
Route S-11-119  
Structure No. 1170011900100  
Cherokee County, South Carolina  
S&ME Project No. 1361-20-048

Dear Mr. Harris:

S&ME, Inc. (S&ME) is pleased to provide the enclosed report detailing our Asbestos and Lead-Based Paint Assessment of the Bear Creek Bridge located on Route S-11-119 in Cherokee County, South Carolina (Structure No. 1170011900100). Our services consisted of an asbestos assessment and lead-based paint assessment. The work was performed in accordance with South Carolina Department of Transportation Basic Agreement Contract Number S-225-18 dated September 23, 2020 and Scope of Services submitted September 10, 2020. The enclosed report includes the executive summary, project background, investigative procedures, findings and results, and conclusions and recommendations as necessary.

This report is provided for the use of the South Carolina Department of Transportation. Use of this report by any other parties will be at such party's sole risk and S&ME, Inc. disclaims liability for any such use or reliance by third parties. The results presented in this report are indicative of conditions only during the time of the assessment.

In accordance with South Carolina Department of Health and Environmental Control Regulation 61-86.1 Standards of Performance for Asbestos Projects, this asbestos assessment report will remain valid for a period of three years from the date of inspection (October 14, 2020).



**Asbestos & Lead-Based Paint Assessment**

**Bear Creek Bridge**

Cherokee County, South Carolina

S&ME Project No. 1361-20-048

We appreciate the opportunity to provide you with our industrial hygiene/environmental services. If you have any questions concerning this report, please call us at (803) 561-9024.

Sincerely,

**S&ME, Inc.**

A handwritten signature in black ink, appearing to read 'B. McAllister', with a long horizontal flourish extending to the right.

Bobby McAllister  
Asbestos Building Inspector  
(SCDHEC License No. BI-01429)

A handwritten signature in black ink, appearing to read 'Tom Behnke', with a long horizontal flourish extending to the right.

Tom Behnke, P.G., CHMM  
Project Manager/Senior Reviewer  
(SCDHEC License No. MP-00004)



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## Executive Summary

An asbestos assessment and lead-based paint assessment was conducted on October 14, 2020 of the bridge over Bear Creek (Structure No. 1170011900100) on Route S-11-119 in Cherokee County, South Carolina. The purpose of the assessment was to identify asbestos-containing materials (ACMs) and lead-based paint coatings associated with the structure prior to renovation or demolition activities.

The bridge consists of a two-lane asphalt paved roadway with wood guard rails resting on concrete deck supported by steel I-beams. It is our understanding that the bridge is scheduled for future renovation/demolition actions.

### Asbestos

The asbestos assessment was performed in general accordance with the South Carolina Department of Health and Environmental Control (SCDHEC) Regulation 61-86.1, *Standards of Performance for Asbestos Projects* effective May 27, 2011. The asbestos assessment included the bulk sampling and analysis of suspect ACMs from the structure. The suspect materials identified on the bridge structure consisted of black mastic used to fill cracks in the roadway.

The Environmental Protection Agency (EPA) and SCDHEC define materials as asbestos-containing if an asbestos content of greater than one percent (>1%) is detected in a representative sample. *Asbestos, in concentrations > 1%, was **not** identified as a result of the assessment.*

### Lead-Based Paint

Painted surfaces associated with the bridge structure were considered suspect and analyzed for lead content. Painted surfaces exceeding the SCDHEC disposal criteria of 0.7 milligrams per square centimeter (mg/cm<sup>2</sup>) were considered lead-based paint for the purpose of this assessment. The following painted components tested met the 0.7 mg/cm<sup>2</sup> threshold and is considered lead-based paint.

- Orange painted structural I-beams

Destructive actions to paint containing detectable levels of lead (e.g. paint preparation, component removal, demolition, sanding, grinding, burning, etc.) may require the contractor to comply with standards of the OSHA regulations 29 CFR 1926.62 (Lead in Construction), including but not limited to training, initial exposure monitoring, the use of personal protective equipment, and medical surveillance. The determination of OSHA applicability is the responsibility of the contractor and dependent upon the paint condition and the planned treatment of the finishes.

This summary is for convenience only and should not be relied upon without first reading the full contents of this report, including appended materials.



## 1.0 Introduction

S&ME was contracted to perform an asbestos assessment and lead-based paint assessment of the Bear Creek Bridge located on Route S-11-119 in Cherokee County, South Carolina. The bridge is identified as structure number 1170011900100. These services were requested and authorized by the South Carolina Department of Transportation (SCDOT). We understand the bridge is scheduled for renovation and/or demolition activities. The asbestos and lead-based paint assessment was performed on October 14, 2020.

The bridge consists of a two-lane asphalt paved roadway with wood guard rails resting on concrete deck supported by steel I-beams. The bridge is approximately 35 feet long and 24 feet wide.

### Asbestos Assessment

The asbestos assessment was performed to identify and sample suspect ACMs in accordance with regulatory requirements for structures scheduled to be renovated or demolished. Demolition and renovation activities are regulated by OSHA, EPA and SCDHEC. The EPA and SCDHEC require asbestos assessments, conducted by licensed individuals, prior to renovation and/or demolition projects. Code 40 of Federal Regulations Part 61-86.1 require asbestos assessments, followed by the proper removal, and disposal of ACM that is affected by renovation or demolition. The identification of ACMs will aid in the prevention of occupational exposures and/or environmental releases of airborne asbestos. Identification of ACM is also required by OSHA 1926.1101. The EPA, OSHA and SCDHEC define ACM as materials containing greater than one (1) percent asbestos in a representative sample. However, OSHA regulates materials containing less than or equal to one percent asbestos. Identification of ACMs also complies with Title 40 Code of the Federal Regulations, part 61, and State Regulation 61-86.1 enforced by the SCDHEC, along with Title 29 Code of Federal Regulations, part 1926 enforced by OSHA.

Section 2.0 describes the assessment procedures used, results of the suspect ACMs sampled and analyzed, confirmed ACMs located on the structure, and conclusions and recommendations regarding the subject bridge as related to ACMs.

### Lead-Based Paint Assessment

The purpose of the lead-based paint assessment was to identify observable lead-based paint finishes associated with the structure which may be adversely affected by future renovation or demolition activities. The identification of these materials will aid in the compliance of occupational exposure (OSHA) and/or environmental releases of airborne lead dust in accordance with 29 CFR 1926.62 (Lead in Construction) and provide information to facilitate proper disposal of lead-based paint coated components and debris in accordance with the SCDHEC and EPA.

## 2.0 Asbestos Assessment

### 2.1 Assessment Procedures

The asbestos assessment was performed by observing and collecting random samples of suspect asbestos-containing materials associated with the subject bridge structure. Significant destructive investigative techniques and sampling was not performed as part of this assessment. Consequently, the possibility exists that suspect materials were not detected in inaccessible areas such as voids, or in areas deemed unsafe to access by the



asbestos inspector. If additional suspect materials are discovered during future renovation or demolition activities, destructive actions to the suspect ACM should not proceed until bulk samples are collected and analyzed for asbestos content.

Suspect ACMs that were observed and sampled consisted of black mastic used to fill cracks in the roadway.

A sampling strategy was developed to provide representative samples of the suspect asbestos-containing materials in accordance with OSHA, SCDHEC and EPA. Bulk samples were then extracted from suspect ACMs, recorded on a chain of custody record and submitted to EMSL Analytical's asbestos laboratory in Pineville, North Carolina for analysis via the following methods:

#### Polarized Light Microscopy (PLM)

The suspect materials were analyzed by trained microscopists using PLM techniques coupled with dispersion staining in accordance with EPA Test Method Title 40 Code of Federal Regulations, Chapter I (1-1-87 edition), Part 763, Subpart F-APPENDIX A. This method identifies asbestos mineral fibers based on six optical characteristics: morphology, birefringence, refractive index, extinction angle, sign of elongation and dispersion staining colors. The laboratory analysis reports the specific type of asbestos identified (there are six asbestos minerals) and the percentage of asbestos presents.

#### Transmission Electron Microscopy (TEM)

In accordance with SCDHEC Regulation 61-86.1, Transmission Electron Microscopy (TEM) confirmation analysis is required to be performed on one sample of any non-friable organically bound material (NOB) that tests negative via PLM analysis. The TEM analysis was performed by EMSL using EPA 600 Method in accordance with ASTM E2356.

Both the PLM and the TEM laboratories are accredited by the National Voluntary Laboratory Accreditation Program (NVLAP), which is administered by the National Institute of Standards and Technology.

## **2.2 Findings and Results**

The asbestos assessment conducted on October 14, 2020 included the quantification and random bulk sampling of various suspect asbestos-containing materials associated with the bridge structure. The suspect materials consisted of black mastic used to fill cracks in the roadway. No suspect asbestos-containing drainage scuppers were observed. The EPA and SCDHEC define materials as asbestos-containing if an asbestos content >1% is detected in a representative sample. In accordance with SCDHEC Regulation 61-86.1, TEM analysis was performed on one sample of each of the following non-friable, organically-bound (NOB) materials from the bridge that displayed a result of no asbestos detected via PLM analysis:

- Black Mastic used to secure roadway reflectors

Of the representative materials sampled and analyzed during this assessment, asbestos in concentrations >1% was **not** identified.



A table summarizing the sample number, location, type of material tested, approximate quantity of the material sampled, condition of the material, and corresponding result for each sample is provided in **Appendix I**. Site location exhibits and photographs are provided in **Appendix II**. The laboratory report is provided in **Appendix III**. A copy of the inspector's SCDHEC license is provided in **Appendix V**.

## 3.0 Lead-Based Paint Assessment

### 3.1 Assessment Procedures

The lead-based paint assessment was conducted for compliance with the SCDHEC limit of 0.7 milligrams (mg) of lead per square centimeter (cm<sup>2</sup>) of painted surface for lead-based paint coated waste. SCDHEC, Health Division defines lead-based paint as a coating containing lead in quantities  $\geq 0.7$  mg/cm<sup>2</sup> (SCDHEC, Health Division definition #4-53-1320f). Any coated surfaces meeting or exceeding the SCDHEC limit of 0.7 mg/cm<sup>2</sup> were considered lead-based paint for the purpose of this assessment.

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 of lead per cubic meter of air (30  $\mu\text{g}/\text{m}^3$ ) during an eight-hour day and a permissible exposure level of fifty micrograms per cubic meter (50  $\mu\text{g}/\text{m}^3$ ).

Representative covered components and surfaces were analyzed utilizing a Niton XLp-300A X-Ray Fluorescence (XRF) spectrum analyzer (serial #95004). The suspect painted finishes were selected based on the color of the topcoat and the underlying paint layers and/or the substrate on which it was applied.

### 3.2 Findings and Results

For the purpose of this assessment, painted surfaces exceeding the SCDHEC disposal limit of 0.7 mg/cm<sup>2</sup> are considered lead-based paint and are applicable to OSHA regulations. The following painted components tested met the 0.7 mg/cm<sup>2</sup> threshold and is considered lead-based paint:

- Orange painted structural I-beams (7.3 – 10.1 mg/cm<sup>2</sup>).

A summary of the paint readings analyzed by the XRF spectrum lead analyzer is provided in **Appendix IV** and provides the sample numbers, sample location, component, substrate, paint color, condition, and results.

## 4.0 Conclusions and Recommendations

The asbestos and lead-based paint assessment conducted of the Bear Creek Bridge (Structure No. 1170011900100) on Route S-11-119 in Cherokee County, South Carolina **did not** identify the presence of asbestos-containing materials. The assessment **did** identify the presence of lead-based paint. Our conclusions and recommendations are summarized below:





## 4.1 Asbestos

No asbestos-containing materials were identified on the structure. If additional suspect ACMs not addressed in this report are discovered during destructive activities, bulk samples should be collected by a SCDHEC licensed inspector and analyzed for asbestos content prior to disturbance or disposal of the suspect materials. This report should also be provided to the contractor(s) to assist with compliance with applicable State and Federal regulations.

## 4.2 Lead-Based Paint

The following painted components tested met the SCDHEC limit of 0.7 mg/cm<sup>2</sup> and is considered lead-based paint:

- Orange painted structural I-beams (7.3 – 10.1 mg/cm<sup>2</sup>).

The client is advised that OSHA does not recognize a threshold level of lead for definition purposes, only the presence or absence of lead. Consequently, the OSHA regulations governing worker protection for lead-based paint may apply to work practices including the disturbance of paint systems with detectable levels of lead. Destructive actions (sanding, burning, demolition, component removal, paint preparation) to the lead-containing paint surfaces will require the contractor comply with the standards of OSHA, including but not limited to initial exposure monitoring, the use of personal protective equipment, and medical surveillance.

SCDHEC Regulation 61-107.19 permits demolition materials painted with lead-based paint ( $\geq 0.7$  mg/cm<sup>2</sup>) to be disposed in a permitted Class Two (C&D) or Class Three Subtitle D, Municipal Solid Waste (MSW) landfill.

Accumulations of paint waste (chips, dust, or flakes) must be tested by the Toxicity Characteristic Leaching Procedure (TCLP) to determine if the waste is classified as hazardous, which requires disposal in a Subtitle C (hazardous waste) landfill. Lead waste, at a minimum, must be disposed in a Class Two or Three landfill.

## 5.0 Limitations

This report is provided for the sole use of the SCDOT. Use of this report by any other parties will be at such party's sole risk, and S&ME disclaims liability for any such use or reliance by third parties. The results presented in this report are indicative of conditions only during the time of the sampling period and of the specific areas referenced. Under no circumstances is this report to be used as a bidding document, or as a project design or specification.

S&ME performed the services in accordance with generally accepted practices of reputable environmental consultants undertaking similar studies at the same time and in the same geographical area. S&ME has endeavored to meet this standard of care. No other warranty, expressed or implied, is intended or made with respect to this report or S&ME's services. Users of this report should consider the scope and limitations related to these services when developing opinions as to risks associated with the site. Additional limitations to our survey are as follows:

## **Asbestos & Lead-Based Paint Assessment**

### **Bear Creek Bridge**

Cherokee County, South Carolina

S&ME Project No. 1361-20-048



- Significant destructive sampling was not performed during the asbestos survey. Additional suspect ACMs may be present in inaccessible locations such as materials encased in concrete. Consequently, if additional suspect materials are discovered during future renovation or demolition activities, bulk samples must be collected and analyzed for asbestos content.
- The subject structure is a bridge over a creek. Not all portions of the underside of the bridge could be observed or reached by the inspectors.

## **Appendices**

## **Appendix I – Summary of Asbestos Sampling**

## Summary of Asbestos Sampling

<b>Project Name:</b> Bear Creek Bridge (Structure No.1170011900100)	<b>Project Number:</b> 1361-20-048
<b>Location:</b> Route S-11-119, Cherokee County, South Carolina	<b>Sampling Date(s):</b> October 14, 2020

### Table I-I Summary of Asbestos Sampling

Sample No.	Sample Location	Material	Approx. Quantity <sup>1</sup>	Asbestos Type	% <sup>2</sup>	Condition	P.F.D. <sup>3</sup>	H.A. <sup>4</sup>
M-1	Cracks on bridge	Black Mastic	150 LF	NAD	NA	NA	NA	NA
M-2	Cracks on bridge	Black Mastic		NAD	NA	NA	NA	NA
M-3	Cracks on bridge	Black Mastic		NAD	NA	NA	NA	NA

SF = square feet      NAD = No Asbestos Detected      NA = Not Applicable

Note 1: Estimated quantities. The quantities should not be used for bidding purposes, as field conditions should be verified.

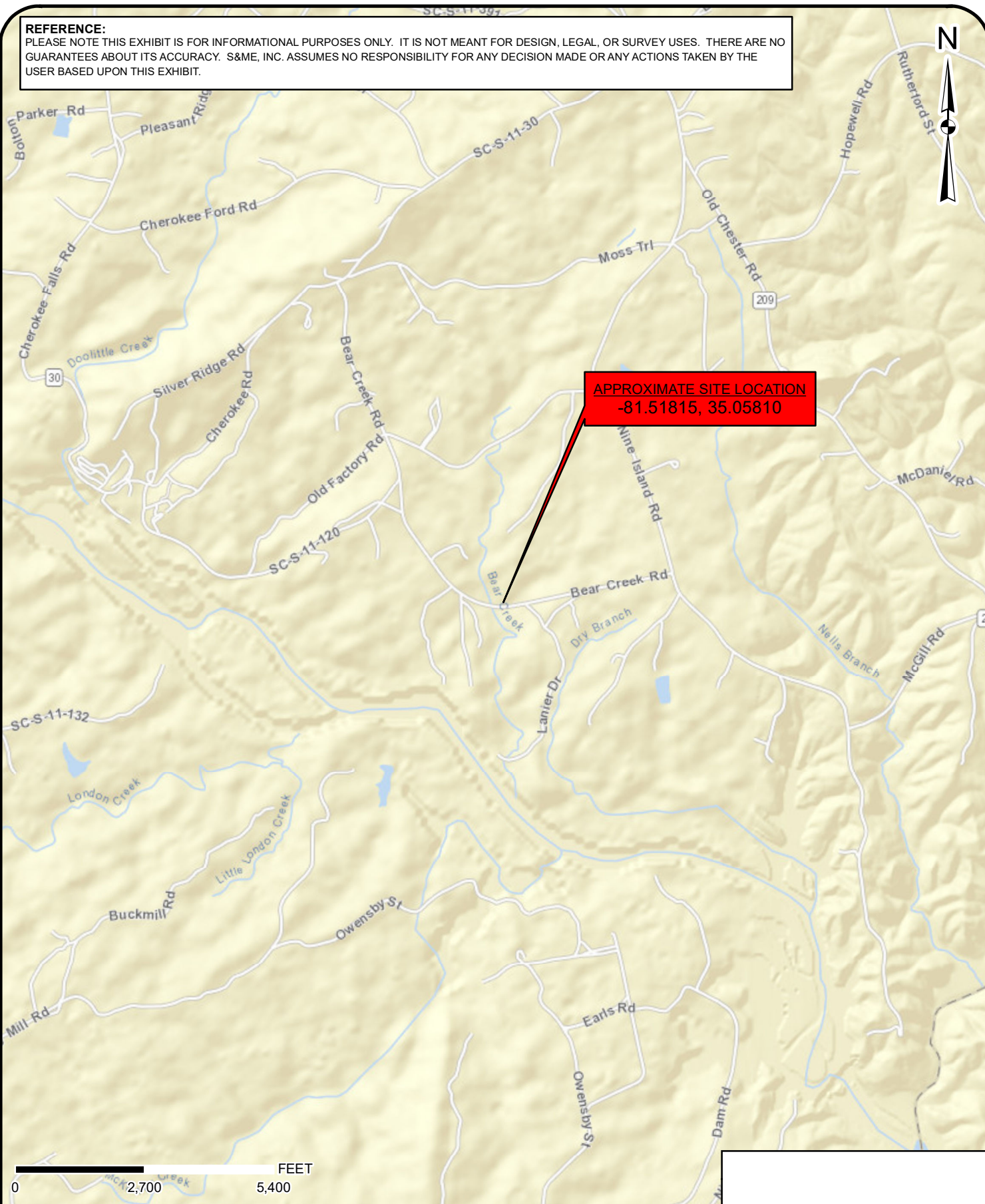
Note 2: The EPA, SCDHEC and OSHA define a material as asbestos-containing if an asbestos content greater than one percent (> 1%) is detected in a representative sample.

Note 3: Potential for Disturbance      Note 4: Hazard Assessment

## **Appendix II – Exhibit and Photographs**

**REFERENCE:**

PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



**APPROXIMATE SITE LOCATION**  
-81.51815, 35.05810

0 2,700 5,400 FEET



**Vicinity Exhibit**  
Bridge Over Bear Creek - S-11-119  
Cherokee County, South Carolina  
Source: World Street Map

SCALE:  
1" = 1 miles  
DATE:  
12-16-20  
PROJECT NUMBER  
1361-20-048

EXHIBIT NO.  
**1**



**REFERENCE:**

PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR SURVEY USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



**APPROXIMATE SITE LOCATION**  
-81.51815, 35.05810

Bear Creek Rd

0 100 200 FEET



**Aerial Exhibit**

Bridge Over Bear Creek - S-11-119

Cherokee County, South Carolina

Source: World Imagery 2019

SCALE:  
1" = 100'

DATE:  
12-16-20

PROJECT NUMBER  
1361-20-048

EXHIBIT NO.

**2**

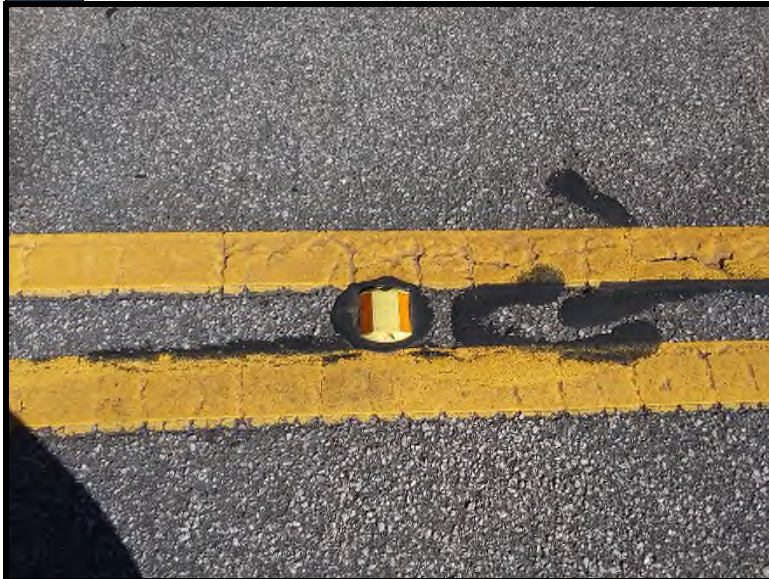




1 View of the subject bridge.



2 View of the subject bridge.



3 Black mastic tested negative for asbestos.



4 Orange I-beams tested positive for lead-based paint (7.30-10.1 mg/cm<sup>2</sup>).



**Site Photographs**  
**Bridge Over Bear Creek – S-11-119**  
**Cherokee County, South Carolina**

S&ME Project No. 1361-20-048

Taken by: T. Knight & B. McAllister

Date: October 14, 2020

## **Appendix III – Asbestos Bulk Sample Analysis Sheets and Chain of Custody Record**



# EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 412008844

Customer ID: S&ME50

Customer PO: 136120048

Project ID:

Attention: Bobby McAllister

S&ME, Inc.

134 Suber Rd.

Columbia, SC 29210

Phone: (803) 561-9024

Fax: (803) 561-9177

Received Date: 10/15/2020 10:00 AM

Analysis Date: 10/16/2020

Collected Date: 10/14/2020

Project: 136120048 - Bear Creek

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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
M-1 412008844-0001	On Cracks - Mastic	Black Non-Fibrous Homogeneous		10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
M-2 412008844-0002	On Cracks - Mastic	Black Non-Fibrous Homogeneous		15% Ca Carbonate 85% Non-fibrous (Other)	None Detected

Analyst(s)

Lacy Searcy (1)

Sarah Breneman (1)

Lee Plumley, Laboratory Manager  
or Other Approved Signatory

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: 10/16/2020 11:24:13





# EMSL Analytical, Inc.

10801 Southern Loop Blvd Pineville, NC 28134

Tel/Fax: (704) 525-2205 / (704) 525-2382

<http://www.EMSL.com> / [charlottelab@emsl.com](mailto:charlottelab@emsl.com)

EMSL Order: 412008844

Customer ID: S&ME50

Customer PO: 136120048

Project ID:

**Attention:** Bobby McAllister  
S&ME, Inc.  
134 Suber Rd.  
Columbia, SC 29210

**Phone:** (803) 561-9024

**Fax:** (803) 561-9177

**Received Date:** 10/15/2020 10:00 AM

**Analysis Date:** 10/19/2020

**Collected Date:** 10/14/2020

**Project:** 136120048 - Bear Creek

## 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
M-3 412008844-0003	On Cracks - Mastic	Black Non-Fibrous Heterogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Derrick Young (1)

Lee Plumley, Laboratory Manager  
or other approved signatory

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: 10/19/2020 14:50:23



EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

# Asbestos Bulk Building Material Chain of Custody

EMSL Order Number (lab use only):

412008844

EMSL Analytical, Inc.  
10801 Southern Loop Blvd

Pineville, NC 28134  
Phone (704) 525-2205  
Fax (704) 525-2382

Company Name : S&ME		EMSL Customer ID:	
Street: 134 Suber Rd.		City: Columbia	State or Province: SC
Zip/Postal Code: 29210	Country: US	Telephone #: 8035619024	Fax #: 8035619177
Report To (Name): Bobby McAllister		Please Provide Results via: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
email Address: bmcallister@smeinc.com		Purchase Order Number: 136120048	
Client Project ID: 136120048 <i>Bea 2 Creek</i>		EMSL Project ID (internal use only):	
State or Province Collected: SC		CT only <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
EMSL-Bill to: <input type="checkbox"/> Same <input checked="" type="checkbox"/> Different - If bill to is different note instructions in comment. Third party billing requires written authorization from third party			
Turnaround Time (TAT) Options Please Check			
<input type="checkbox"/> 3 Hour	<input type="checkbox"/> 6 Hour	<input type="checkbox"/> 24 Hour	<input type="checkbox"/> 32 Hour* <input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week
*32 Hour TAT available for select tests only; samples must be submitted by 11:30am. Please call ahead for large projects and/or turnaround times 6 hours or less.			
<b>PLM - Bulk (reporting limit)</b>		<b>TEM - Bulk</b>	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%)		<input checked="" type="checkbox"/> TEM EPA NOB - EPA 600/R-93/116 Section 2.5.5.1	
<input type="checkbox"/> PLM EPA NOB (<1%)		<input type="checkbox"/> NY ELAP Method 198.4 non-friable - NY	
Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> Chatfield Protocol (semi-quantitative)	
Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)		<input type="checkbox"/> TEM % by Mass - EPA 600/R-93/116 Section 2.5.5.2	
<input type="checkbox"/> NIOSH 9002 (<1%)		<input type="checkbox"/> TEM Qualitative via Filtration Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.1- friable - NY		<input type="checkbox"/> TEM Qualitative via Drop Mount Prep Technique	
<input type="checkbox"/> NY ELAP Method 198.6 NOB- non-friable - NY		<b>Other tests (please specify)</b>	
<input type="checkbox"/> NY ELAP Method 198.8- Vermiculite Surfacing Material			
<input type="checkbox"/> OSHA ID-191 Modified			
<input type="checkbox"/> EMSL Standard Addition Method			
<input type="checkbox"/> Positive Stop - Clearly Identify Homogenous Areas (HA)		Date Sampled: 10/14/20	
Sampler's Name: <i>Rev. 3 6h-9h</i>		Sampler's Signature: <i>[Signature]</i>	
Sample #	HA #	Sample Location	Material Description
M-1		Mastic on cracks	Mastic
2			
3	TEM		
Client Sample # (s):		Total # of Samples:	
Relinquished by (Client): <i>[Signature]</i>		Date: 10/14/20	Time: 5:10
Received by (Lab): <i>[Signature]</i>		Date: 10-15-20	Time: 1000 EMSL FX
Comments/Special Instructions:		B:11 to ! A?@smeinc.com 7959 4989 4528	
<small>NOB = 2 PLMs and 1 TEM if both PLMs are negative. BITE: S&amp;ME, 2724 Discovery Drive, Suite 120 Raleigh, North Carolina 27616 Attention: Travis Knight Phone: 8035619024 Email: tknight@smeinc.com Purchase Order: 136120048</small>			

Page 1 of \_\_\_\_\_

Controlled Document - COC-01 Asbestos Bulk - R4 - 09/10/2019

EMSL Analytical, Inc.'s (DBA: LA Testing) Laboratory Terms and Conditions are incorporated into this chain of custody by reference in their entirety. Submission of samples to EMSL Analytical Inc. constitutes acceptance and acknowledgment of all terms and conditions.

## **Appendix IV – XRF Lead-Based Paint Reading Summary Table**

# XRF LEAD-BASED PAINT READING SUMMARY TABLE

Serial #95004  
 PAINT  
 Project No.: 1361-20-048  
 Site: Bear Creek Bridge  
 Date: October 14, 2020  
 Ranges (NEG<INC<POS): Device PCS



Reading Number	Floor/Area	Room	Feature	Substrate	Condition	Color	Result	XRF Reading (mg/cm²)
1			Shutter Calibrate					--
2			Calibrate					0.80
3			Calibrate					0.80
4			Calibrate					0.90
5	Bridge	Top of bridge	Stripe	Asphalt	Non-Deteriorated	White	Negative	<LOD
6	Bridge	Top of bridge	Stripe	Asphalt	Non-Deteriorated	Yellow	Negative	<LOD
7	Bridge	Bottom of bridge	Outside beam	Metal	Deteriorated	Orange	Positive	10.10
8	Bridge	Bottom of bridge	Inside beam	Metal	Deteriorated	Orange	Positive	7.30
9			Post Calibrate					0.90
10			Post Calibrate					0.90
11			Post Calibrate					1.00

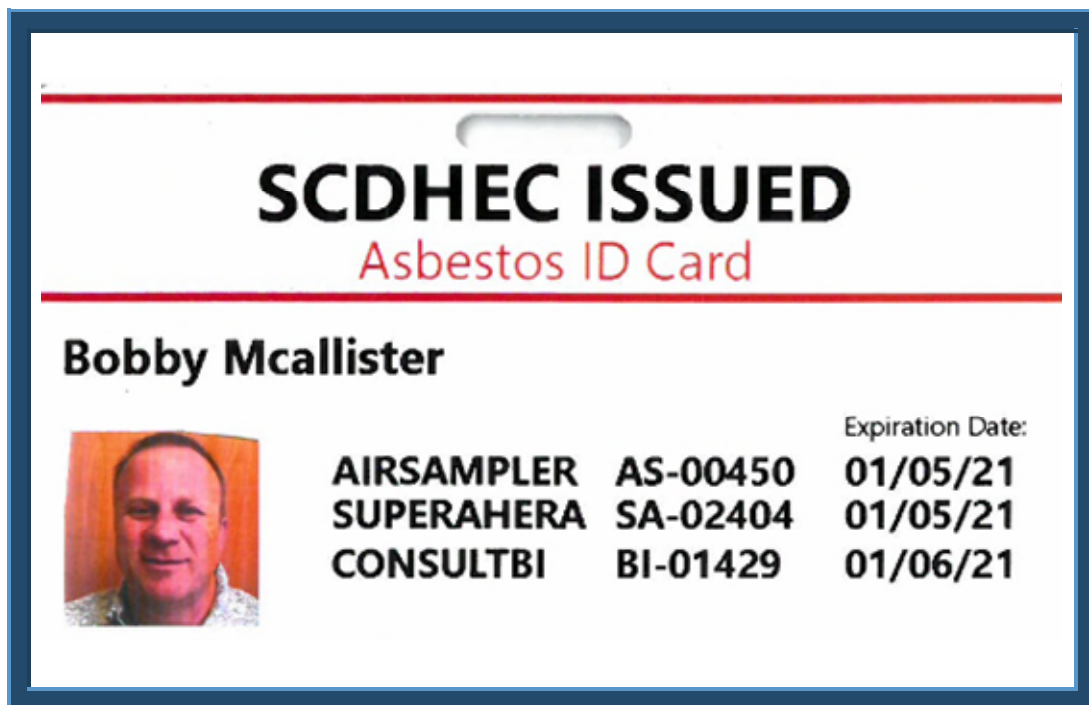
## **Appendix V – Copy of SCDHEC Inspectors' Licenses**





South Carolina Department  
of  
Health and Environmental Control  
Asbestos License

Bobby J. McAllister






South Carolina Department  
of  
Health and Environmental Control  
Asbestos License

Travis L. Knight

**SCDHEC ISSUED**  
Asbestos ID Card

**Travis Knight**



CONSULTPD	PD-00166	12/10/20
AIRSAMPLER	AS-00237	01/05/21
CONSULTBI	BI-00885	01/06/21
SUPERAHERA	SA-01266	01/05/21

Expiration Date: