



## ASBESTOS CONTAINING MATERIAL INVESTIGATION REPORT

S-46-59 (N. BURRIS RD.) RBO LITTLE TURKEY CREEK  
YORK COUNTY, SOUTH CAROLINA  
PROJECT ID P043996

### PREPARED FOR:



c/o Mr. Trapp Harris, PE  
955 Park Street  
Columbia, SC 29201

### PREPARED BY:

F&ME Consultants, Inc.  
211 Business Park Blvd  
Columbia, South Carolina 29203

**November 6, 2024**

ACM was found.

ACM was not found.

F&ME Project No.: G7100.007

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# 1. EXECUTIVE SUMMARY

This executive summary is intended as an overview for the convenience of the reader. This report should be reviewed in its entirety prior to making any decisions regarding this project.

F&ME Consultants, Inc. (FME) has completed an Asbestos Containing Material (ACM) Investigation of S-46-59 (N. Burriss Rd.) Bridge over Little Turkey Creek (Bridge) in York County, South Carolina at the request of South Carolina Department of Transportation (SCDOT) (Client). The field investigation was performed on October 31, 2024, in anticipation of an on-alignment replacement of the existing Bridge. This investigation was also conducted pursuant to South Carolina Department of Environmental Services (SCDES), United States Environmental Protection Agency (USEPA), National Emission Standards for Hazardous Air Pollutants (NESHAP), and Occupational Safety and Health Administration (OSHA) regulations requiring an ACM investigation prior to any demolition activities.

Per an agreed upon scope of work, FME performed this investigation to identify ACM that might be encountered during the demolition activities associated with the existing Bridge, and to provide recommendations regarding proper handling and disposal of ACM found. The investigation of the Bridge identified two (2) suspect materials; black expansion joint mastic and timber pile cap felt. During the field investigation, FME personnel collected samples of these materials and assessed their physical conditions. **Laboratory results indicated that the suspect materials sampled during this investigation contained no asbestos.** Therefore, at this time, no special handling or disposal requirements are required regarding ACM. However, during the course of demolition activities, previously concealed ACM might be discovered. If suspect ACM (i.e., bond break bearing pad materials) is found, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner/Asbestos Consultant for an appropriate response action. The SCDES must be notified if any suspect ACM is discovered.

We sincerely appreciate the opportunity to assist you with this project. Should you have any questions or require additional information concerning this Investigation, please do not hesitate to contact our office at (803) 254-4540.

Sincerely,

F&ME CONSULTANTS



**Brianna M. Bailey**

Environmental Professional  
Asbestos Consultant/Inspector  
SCDHEC License No: MP-00325  
Expiration Date 03/14/2025



**Glynn M. Ellen**

Environmental Department Manager  
Asbestos Consultant/Management Planner  
SCDHEC License No: ASB-22641  
Expiration Date 01/29/2025

## 2. INTRODUCTION

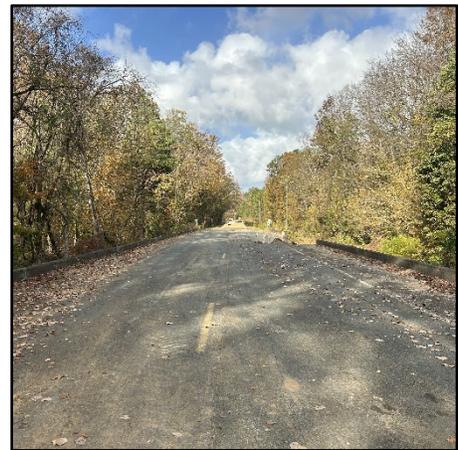
FME has completed an ACM investigation of the S-46-59 (N. Burris Rd.) Bridge over Little Turkey Creek, in York County, South Carolina. The investigation was performed on October 31, 2024. This investigation was conducted pursuant to SCDES, USEPA, NESHAP, and OSHA regulations which require an ACM investigation prior to any demolition activities. Refer to Appendix A, Site Vicinity Map for the location of the Bridge.

It is our understanding that the proposed project will include the complete demolition and removal of the existing Bridge, and replacement with a new bridge along the existing alignment. The purpose of this investigation was to determine if asbestos was present on the existing Bridge by identifying and sampling suspect ACM, obtaining analytical results, quantifying any confirmed ACM, and assessing the physical condition of the ACM, where possible.

This report has been prepared exclusively for the Client and shall not be disseminated in whole or part to other parties without prior consent from Client or FME. No other environmental issues were addressed as part of this report.

## 3. EXISTING BRIDGE STRUCTURE

The existing Bridge ( $\approx 210'$  L x  $32'$  W, inside curb to inside curb), is located on route S-46-59 (N. Burris Rd.) and crosses over Little Turkey Creek in York County, South Carolina. The construction date of the Bridge is unknown. The structure is a two (2) lane, seven (7) span Bridge constructed with pre-fabricated concrete bridge deck with concrete curbing and an asphalt overlay. The Bridge deck is supported by eleven (11) horizontal precast channel concrete beams. Each poured-in-place (PIP) bent cap is supported by five (5) structural timber piles and timber cross bracing. Drainage scuppers were noted on the Bridge. Refer to Appendix A, Site Vicinity Map, for the location of the Bridge. Appendix B, General Bridge Plan, for a layout of the Bridge.



*Photo 1: S-46-59 Bridge over Little Turkey Creek in York County, South Carolina.*

## 4. FIELD ASSESSMENT

During the investigation, accessible bridge components (i.e., bent caps, timber piles, scuppers, expansion joints, etc.) were visually inspected for suspect ACM. Examples of possible suspect materials include bond break bearing pads, expansion joint material, and drainage scuppers. Two (2) suspect materials were observed/visible on the Bridge. The suspect materials noted on the Bridge were black expansion joint mastic and timber pile cap felt. Samples of these materials were taken from random locations on the Bridge. Refer to Appendix B, Sample Location Plan, for detailed sample locations. Also, refer to Appendix G, Site Photographs, for more details.

## 5. ASSESSMENT RESULTS

During the investigation, the black expansion joint mastic and timber pile cap felt were the only suspect materials identified associated with the Bridge. A total of three (3) random samples were taken of each of the suspect materials for laboratory analysis and physical characteristics were recorded. The remaining structural materials (i.e., wood, steel, etc.) were not considered suspect and were not sampled.

Bulk samples of suspect materials were analyzed by Polarized Light Microscopy (PLM) in accordance with EPA 600/R-93/116. Confirmation Transmission Electron Microscopy (TEM) was also performed on any non-friable organically bound materials that tested negative for asbestos content as per SCDES regulations effective May 27, 2011. A “*first positive stop*” protocol was implemented for sample testing. This protocol establishes that if the first sample of a material tested positive for asbestos content, subsequent samples were not to be analyzed and would be considered positive as well. A total of four (4) samples were analyzed by PLM and two (2) samples were TEM-confirmed. **The results of the analysis indicated that none of the suspect materials sampled during this investigation contained asbestos.** Results of laboratory analysis are summarized in Appendix C, Summary of Sample Results.

Appropriate sampling and chain-of-custody protocols were followed to ensure proper handling and delivery of samples to the analytical laboratory. Appendix D, Laboratory Analysis Reports and Appendix E, Laboratory Chain of Custody were provided to show laboratory documentation of the analytical results. Appendix F, Personnel Certification, provides the qualifications for the FME Asbestos Inspectors.

## 6. RECOMMENDATIONS

The results, conclusions, and recommendations of this Investigation are representative of the conditions observed at the site on the date of the field investigation. FME does not assume responsibility for any changes in conditions or circumstances that may have occurred after this investigation.

It is our understanding that the subject Bridge is to be demolished in anticipation of an on-alignment replacement of the existing Bridge structure. **The results of the analysis indicated that the materials sampled during this investigation contained no asbestos.** Therefore, there are no foreseen special handling or disposal requirements, regarding asbestos, that will be required for the demolition of this Bridge.

If any concealed and/or inaccessible suspect ACM (i.e., bond break bearing pad materials) are encountered during the demolition activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner/asbestos Consultant for an appropriate response action. The SCDES must be notified if any suspect ACM is discovered.

This report has been prepared exclusively for the Client and FME and shall not be disseminated in whole or in part to other parties without prior consent from the Client and FME. Use of this document for bidding purposes is not recommended without prior consultation with FME.

We sincerely appreciate the opportunity to be of service to SCDOT in this matter. If you have any questions regarding the information presented herein, please contact our office at (803) 254-4540.

## APPENDICES

Appendix A – Site Vicinity Map

Appendix B – Sample Location Plan

Appendix C – Summary of Samples

Appendix D – Laboratory Analysis Reports

Appendix E – Chain of Custody Form

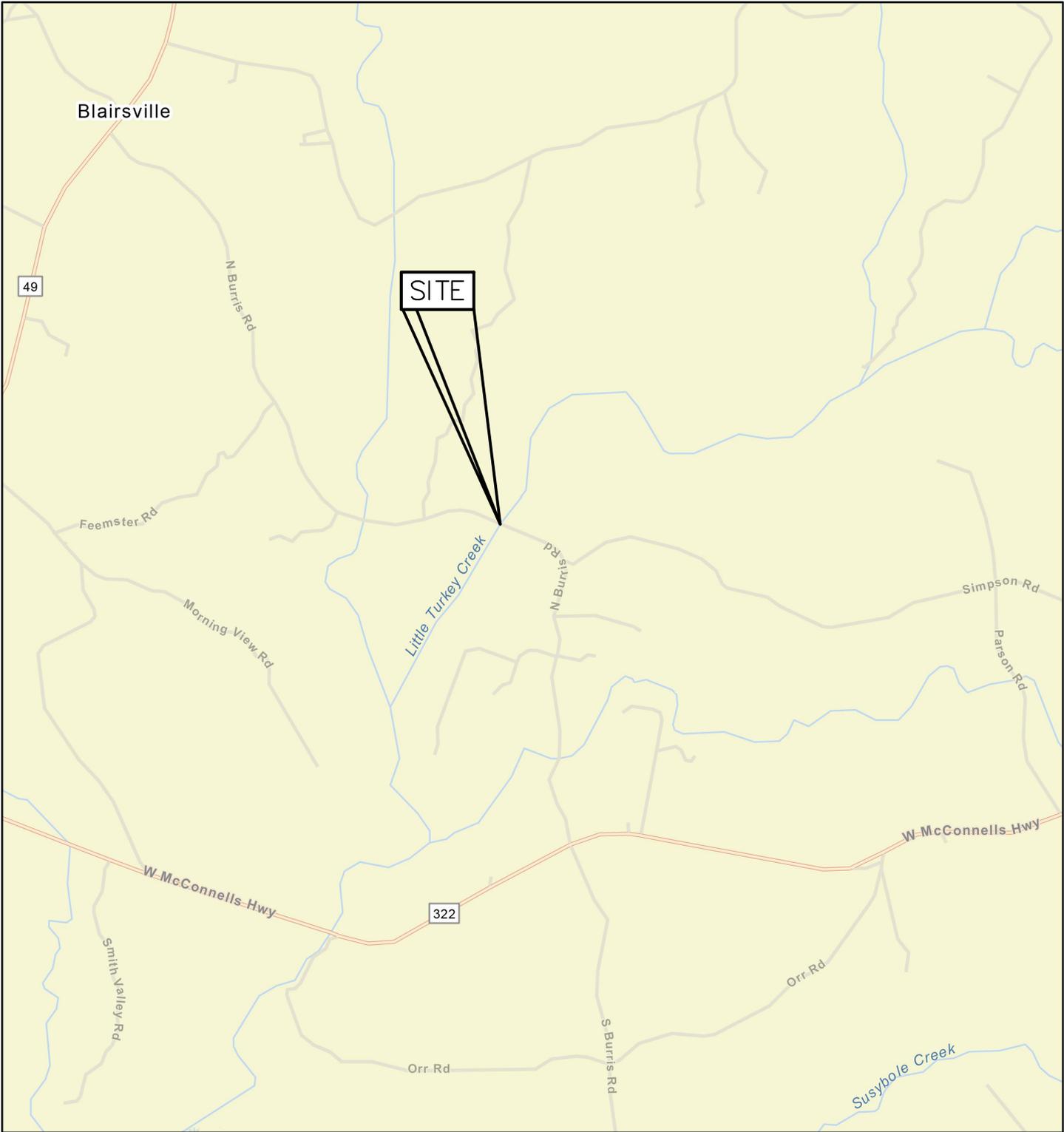
Appendix F – Personnel Certifications

Appendix G – Site Photographs



## Appendix A

### Site Vicinity Map



York County Government, SC, State of North Carolina DOT, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

1:58,000

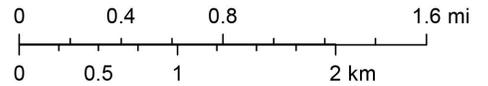


FIGURE NUMBER:

1

F&M CONSULTANTS PROJECT NUMBER:

G67100.007

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
 S-46-59 over Little Turkey Creek  
 York County, SC  
 Site Vicinity Map  
 Prepared for: SCDOT  
 955 Park Street  
 Columbia, SC 29201



211 BUSINESS PARK BLVD.  
 COLUMBIA, SC 29203

ORIGINAL:	November 1, 2024
REVISIONS:	
1	
2	
3	
SCALE:	AS SHOWN

DRWN. BY:	MSM
CHKD. BY:	BMB
APPR. BY:	GME
NOTES:	

## Appendix B

### Sample Location Plan

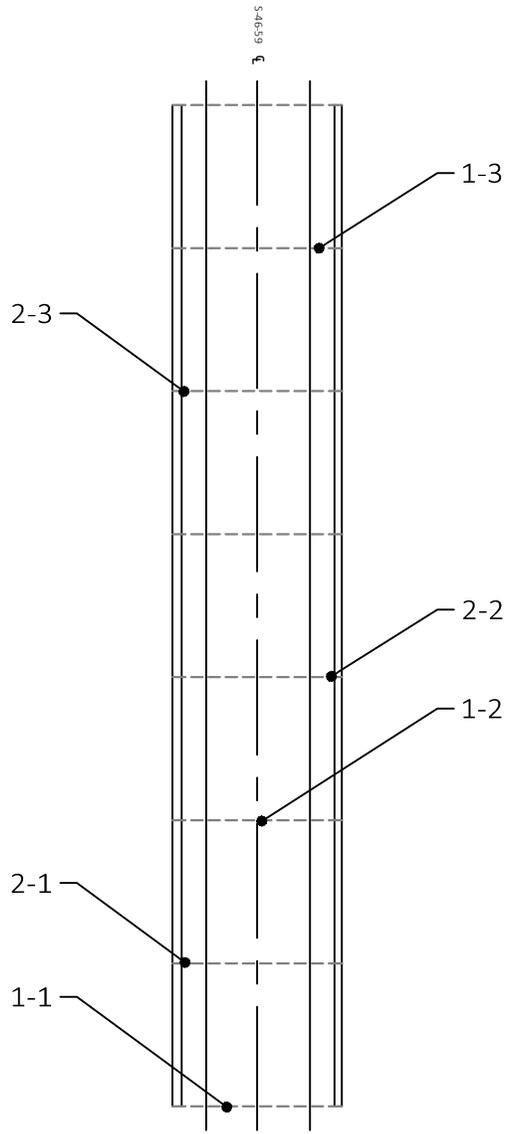


FIGURE  
NUMBER:  
  
2

F&ME CONSULTANTS  
PROJECT NUMBER:  
  
G7100.007

ASBESTOS CONTAINING MATERIALS INVESTIGATION  
S-46-59 over Little Turkey Creek  
York County, SC  
Sample Location Plan  
Prepared for: SCDOT  
955 Park Street  
Columbia, SC 29201

211 BUSINESS PARK BLVD.  
COLUMBIA, SC 29203

ORIGINAL:	November 1, 2024
REVISIONS:	
1	
2	
3	
SCALE:	N.T.S.

DRWN. BY:	MSM
CHKD. BY:	BMB
APPR. BY:	GME
NOTES:	

## Appendix C

### Summary of Samples

## Appendix C: Summary of Samples

Sample ID	Description
1-1	Black Expansion Joint Mastic
1-2	Black Expansion Joint Mastic
1-3	Black Expansion Joint Mastic
2-1	Timber Pile Cap Felt
2-2	Timber Pile Cap Felt
2-3	Timber Pile Cap Felt



## Appendix D

### Laboratory Analysis Reports



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

<http://www.EMSL.com/kernersvillelab@emsl.com>

<b>EMSL Order:</b> 022406230
<b>Customer ID:</b> FMEC62
<b>Customer PO:</b> G7100.007
<b>Project ID:</b>

<b>Attention:</b> Glynn M. Ellen F & ME Consultants 211 Business Park Blvd Columbia, SC 29203	<b>Phone:</b> (803) 254-4540 <b>Fax:</b> (803) 254-4542 <b>Received Date:</b> 11/01/2024 9:15 AM <b>Analysis Date:</b> 11/01/2024 - 11/04/2024 <b>Collected Date:</b>
<b>Project:</b> S-46-59 over Little Turkey Creek	

## 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

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-1 <i>022406230-0001</i>	Expansion Joint Mastic	Black Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
1-2 <i>022406230-0002</i>	Expansion Joint Mastic	Brown/Black Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
2-1 <i>022406230-0003</i>	Timber Pile Cap Felt	Brown/Black Fibrous Homogeneous	80% Cellulose	20% Non-fibrous (Other)	None Detected
2-2 <i>022406230-0004</i>	Timber Pile Cap Felt	Brown/Black Fibrous Homogeneous	75% Cellulose	25% Non-fibrous (Other)	None Detected

Analyst(s)  
 \_\_\_\_\_  
 Jurnee West (2)  
 Scott Combs (2)

  
 \_\_\_\_\_  
 Stephen Bennett, 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. Kernersville, NC NVLAP Lab Code 102104-0, Virginia 3333-000228, West Virginia LT000321

Initial report from: 11/04/2024 08:20:30



# EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284  
Tel/Fax: (336) 992-1025 / (336) 992-4175  
<http://www.EMSL.com> / [kernersvillelab@emsl.com](mailto:kernersvillelab@emsl.com)

**EMSL Order:** 022406230  
**Customer ID:** FMEC62  
**Customer PO:** G7100.007  
**Project ID:**

**Attention:** Glynn M. Ellen  
F & ME Consultants  
211 Business Park Blvd  
Columbia, SC 29203  
**Phone:** (803) 254-4540  
**Fax:** (803) 254-4542  
**Received Date:** 11/01/2024 9:15 AM  
**Analysis Date:** 11/04/2024  
**Collected Date:**  
**Project:** S-46-59 over Little Turkey 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
1-3 022406230-0005	Expansion Joint Mastic	Black Non-Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected
2-3 022406230-0006	Timber Pile Cap Felt	Black Fibrous Homogeneous	100.0 Other	None	No Asbestos Detected

Analyst(s)

Stephen Bennett (2)

Stephen Bennett, 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. Kernersville, NC

Initial report from: 11/04/2024 14:54:03

## Appendix E

### Chain of Custody Form



EMSL ANALYTICAL, INC. LABORATORY PRODUCTS TRAINING

Asbestos Chain of Custody EMSL Order Number (Lab Use Only):

022406230

EMSL ANALYTICAL, INC. 706 GRALIN ST. KERNERSVILLE, NC 27284 PHONE: (336) 992-1025 FAX: (336) 992-4175

Company Name: F&ME Consultants EMSL Customer ID: FMEC62
Street: 211 Business Park Blvd. Columbia, SC City: Columbia State/Province: SC
Zip/Postal Code: 29203 Country: USA Telephone #: 803-254-4540 Fax #: 803-254-4542
Report To (Name): Glynn Ellen, Mike Mincey Please Provide Results: [ ] Fax [x] Email
Email Address: gellen@fmeconsultants.com, mmincey@fmeconsultants.com Purchase Order: G7100.007
Project Name/Number: S-46-59 over Little Turkey Creek EMSL Project ID (Internal Use Only):
U.S. State Samples Taken: SC CT Samples: [ ] Commercial/Taxable [ ] Residential/Tax Exempt

EMSL-Bill to: [x] 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 [x] 24 Hour [x] 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)
[x] 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
[x] 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: [ ]

[x] Check For Positive Stop - Clearly Identify Homogenous Group Filter Pore Size (Air Samples): [ ] 0.8µm [ ] 0.45µm

Samplers Name: Brianna Bailey

Samplers Signature: Brianna Bailey

Table with 4 columns: Sample #, Sample Description, Volume/Area (Air) HA # (Bulk), Date/Time Sampled. Rows include: \*1-1 thru 1-3 Timber Pile Cap Felt, \*2-1 thru 2-3 Expansion Joint Mastic.

Client Sample # (s): 1-1 - 2-3 Total # of Samples: 6

Relinquished (Client): Brianna Bailey Date: 10/31/2024 Time: 17:00

Received (Lab): Jon Sweet Date: 11/24 Time: 9:15

Comments/Special Instructions: SC Guidelines

DEK 7915 2582 9230

## Appendix F

### Personnel Certifications

# SCDHEC ISSUED

## Asbestos ID Card

**Brianna Bailey**



**AIRSAMPLER  
CONSULTMP  
SUPERAHERA**

**AS-000749  
MP-000325  
SA-004090**

**Expiration Date:**

**05/02/25  
03/14/25  
05/02/25**

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



# SCDES ISSUED

## Asbestos ID Card



**Glynn M Ellen**



		<b>Expiration Date:</b>
<b>AIRSAMPLER</b>	<b>AS-00079</b>	<b>01/30/25</b>
<b>CONSULTMP</b>	<b>ASB-22641</b>	<b>01/29/25</b>
<b>CONSULTPD</b>	<b>PD-00098</b>	<b>08/07/25</b>
<b>SUPERAHERA</b>	<b>SA-00455</b>	<b>01/30/25</b>

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 SCDES. 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

SCDES - Asbestos Section  
 2600 Bull Street  
 Columbia, SC 29201  
 (803) 898-4289



## Appendix G

### Site Photographs



**Photo 1.** Top View of Bridge Deck.



**Photo 2.** Non-ACM Timber Pile Cap Felt.



**Photo 3.** Southeast Corner View of Bridge.



**Photo 4.** Damage on Bridge.



**Photo 5.** End Cap Support Underside View.



**Photo 6.** SCDOT Asset # Placard Attached to the Concrete Curb.

