

ASBESTOS CONTAINING MATERIALS INVESTIGATION REPORT

**S-32-48 BRIDGE OVER I-26
SCDOT #327004800100
LEXINGTON COUNTY, SOUTH CAROLINA**

REPORT PREPARED FOR:



**SOUTH CAROLINA DEPARTMENT OF
TRANSPORTATION
C/O Mark Hunter
955 Park Street
Columbia, SC 29202**

BY:

**F&ME CONSULTANTS
3112 Devine Street
Columbia, South Carolina 29205
(803) 254-4540**

March 28, 2013

☒ Yes, asbestos was found.
☐ No, asbestos was not found.

E5350.02

March 28, 2013

Mr. Mark Hunter
South Carolina Department of Transportation
955 Park Street
Columbia, South Carolina 29202

Re.: Asbestos Containing Materials Investigation Report
S-32-48 Bridge over I-26
SCDOT #327004800100
Lexington County, South Carolina
F&ME Project No.: E5350.02

Dear Mr. Hunter:

As requested, F&ME Consultants has completed an Asbestos Containing Materials (ACM) Investigation for the above-referenced bridge. The investigation of the subject bridge identified the following five (5) suspect materials: top of decking expansion joint/crack seal material; underlying expansion joint material; top of curb expansion joint material; scuppers and end bent felt pads. Laboratory results indicate that of the materials analyzed, only the eight (8) scuppers (drains) and the end bent felt pads contain asbestos. Attached is the report of our findings.

All ACM associated with the bridge structure must be removed, handled and disposed of per SCDHEC regulations pertaining to asbestos waste. Since removal of these types of bridge components prior to demolition and/or renovation activities is not practical, these activities will require coordination with a licensed abatement contractor. Based on the quantities of ACM identified, no abatement project design will be required.

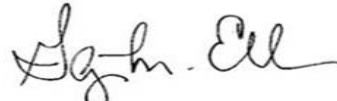
We appreciate the opportunity to assist you in this matter. If you have any questions or require additional information, please feel free to contact our office at (803) 254-4540.

Sincerely,

F&ME CONSULTANTS



Michael S. Mincey
Environmental Professional
Asbestos Consultant/Mngmnt. Planner
SCDHEC License No: MP-00161
Expiration Date 02/15/2014



Glynn M. Ellen
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SCDHEC License No: ASB-22641
Expiration Date 02/15/2014

MSM/GME/jls

TABLE OF CONTENTS

| | |
|--|---|
| I. Introduction | 1 |
| II. Existing Bridge Structure | 1 |
| III. Investigation Results..... | 1 |
| IV. Asbestos Containing Materials Description & Assessment | 2 |
| V. Recommendations | 3 |

APPENDIX A

- Site Vicinity Map (Figure 1)
- ACM Sample Location Plan (Figure 2)
- Homogeneous Area Plan (Figure 3)

APPENDIX B

- Summary of Samples (Table I)
- Summary of Asbestos Containing Materials (Table II)
- Summary of Inspection
- Physical Assessment Data Sheets
- Bulk Asbestos Analytical Reports
- Chain of Custody

APPENDIX C

- Photographs

APPENDIX D

- Personnel Certifications

APPENDIX E

- SCDHEC Regulation Summary
- SCDHEC Abatement Project Forms

I. INTRODUCTION

As requested, F&ME Consultants has completed an Asbestos Containing Materials (ACM) investigation on the S-32-48 Bridge over I-26 (SCDOT #327004800100) located in Lexington County, South Carolina. Performed on March 21, 2013, this investigation was conducted pursuant to SCDHEC, USEPA, NESHAP, and OSHA regulations requiring an ACM investigation prior to any demolition and/or renovation activities.

The purpose of this investigation is to determine if asbestos is present on the existing bridge structure. This task includes identifying and sampling suspect ACM; obtaining analytical results to determine whether or not asbestos is present; quantifying confirmed ACM; and assessing the physical condition of the ACM, where possible.

During the inspection, all bridge components (i.e. concrete bent caps, piles, columns, and expansion joints) were visually inspected for suspect ACM. The results, conclusions, and recommendations of this investigation are representative of the conditions observed at the site on the date of the field inspection. F&ME does not assume responsibility for any changes in conditions or circumstances that occur after the inspection.

This report has been prepared exclusively for the South Carolina Department of Transportation and shall not be disseminated in whole or part to other parties without prior consent from the South Carolina Department of Transportation or F&ME Consultants, Inc. No other environmental issues were addressed as part of this report.

II. EXISTING BRIDGE STRUCTURE

The subject bridge is a two (2) lane SCDOT bridge structure (~226'L x 28'W, measured from inside curb edge to inside curb edge) with an asphalt overlay. According to a stamped date on the bridge's guardrail, it was originally built in 1959. The structural components of the subject bridge are concrete (i.e. deck sections/spans, curbing, drilled shafts, and beams and diaphragms). The bridge has a total of five (5) bents, with two (2) end bents and three (3) interior bents. Each bent has a concrete cap, and each interior bent cap is supported by three (3) concrete drilled shafts. The end bent cap supports are covered with soil.

III. INVESTIGATION RESULTS

During the investigation, the following suspect materials were observed on the subject bridge:

- Top of Decking Expansion Joint/Crack Seal Material
- Underlying Expansion Joint Material
- Top of Curbing Expansion Joint Material
- Scuppers (Drains)
- End Bent Felt Pad

Random samples of the suspect materials were collected for laboratory analysis and their physical characteristics were recorded. The remaining structural materials (i.e. concrete, etc.) are not considered suspect and were not sampled.

The samples of the suspect material were analyzed by polarized light microscopy (PLM) in accordance with EPA 600/R-93/116. A “first positive stop” protocol was requested, meaning that if the first sample of a material was positive for asbestos content, subsequent samples were not to be analyzed. Also, confirmation transmission electron microscopy (TEM) analysis was required for non-friable, organically-bound materials that were found to be negative for asbestos (as per SCDHEC regulations effective June 27, 2008). Appropriate sampling and chain-of-custody protocols were followed to ensure proper handling and delivery of samples to the analytical laboratory.

A total of fifteen (15) samples were collected from the subject bridge. Due to activation of the “first positive stop” protocol, nine (9) samples were analyzed by PLM and four (4) were TEM-confirmed. Of the materials analyzed, only the scuppers (drains) and the end bent felt pads were found to contain asbestos (also see Table II, Summary of Asbestos Containing Materials). For more information regarding the location of these materials, refer to the Homogeneous Area Plan (Figure 3) located in the appendix.

The Appendices include a Site Vicinity Map (Figure 1), a Sample Location Plan (Figure 2), a Homogeneous Area Plan (Figure 3), a Summary of Samples (Table I), a Summary of Asbestos Containing Materials (Table II), Physical Assessment Data Sheets, Bulk Sample Analysis Reports, the Chain of Custody, Photographs, Personnel Certifications, a SCDHEC Regulation Summary and SCDHEC Abatement Project Forms.

IV. ASBESTOS CONTAINING MATERIALS DESCRIPTION & ASSESSMENT

The following items are descriptions and quantities of the asbestos containing materials identified within the interior of the subject bridge structure (See Homogeneous Area Plan, Figure 3):

- **HA-1 – Scuppers (Drains) (8 Units)**

Asbestos-containing scuppers are located along the east and west sides of the bridge. Each scupper is approximately 4” in diameter and extends from the top of the bridge deck to the underside of the bridge deck. The bridge has a total of eight (8) scuppers, with four (4) on each side. The exposed portions where this material was sampled appeared to be in good condition. Since demolition and/or renovation activities will impact this material, it must be removed and disposed of as ACM by a licensed abatement contractor.

- **HA-2 – End Bent Felt Pads (~100 S.F.)**

The asbestos-containing end bent felt pads are located beneath the two (2) end bents. Due to this material being encapsulated under each end bent, assessment of its complete condition is not possible. The exposed portions where this material was sampled appeared to be in good condition. Since demolition and/or renovation activities will impact this material, it must be removed and disposed of as ACM by a licensed abatement contractor.

Asbestos containing materials are categorized by SCDHEC as friable (a.k.a. regulated asbestos containing materials, or RACM), Category I non-friable ACM (packing, gaskets, floor coverings, asphalt roofing products, etc.) and Category II non-friable ACM (other non-friable materials not covered in Category I). SCDHEC regulates any disturbances of friable/RACM, requiring its removal prior to demolition or renovation activities.

SCDHEC also legally tracks the dumping of all ACM into landfills. Therefore, SCDHEC must be notified prior to abatement and demolition projects in order to arrange for the proper disposal of ACM and associated contaminated debris. Most landfills will not accept ACM or asbestos-contaminated debris. This is an important consideration for the owner because it is more expensive to dispose of ACM than normal debris. If the abatement/ demolition contractor selects a landfill that accepts ACM, the entire load of abatement/ demolition debris could be transported to the permitted landfill. However, since the ACM would be mixed in with the total demolition debris, all of the debris would be considered to be ACM resulting in higher disposal costs. Therefore, it is recommended that removal of all asbestos is conducted prior to and separate from building demolition activities.

Unlike SCDHEC, OSHA does not distinguish between friable and non-friable ACM, regulated and non-regulated ACM, and/or ACM in good condition versus ACM in poor/damaged condition. Instead, OSHA regulates all worker contact with asbestos.

This report has been prepared exclusively for the South Carolina Department of Transportation, and shall not be disseminated in whole or part to other parties without prior consent from the South Carolina Department of Transportation or F&ME Consultants, Inc. No other environmental issues are addressed in this report.

V. RECOMMENDATIONS

It is our understanding that the results of this investigation are intended to aide in the demolition and/or renovation planning of the subject bridge structure. Prior these activities, the identified ACM associated with the bridge structure must be removed, handled and disposed of per SCDHEC regulations pertaining to asbestos waste. Since removal of these types of bridge components (i.e. bent cap felt pads and expansion joint compound) prior to demolition and/or renovation activities is not practical, these activities will require coordination with a licensed abatement contractor. Based on the quantities of ACM identified, no abatement project design will be required.

All asbestos waste must be deposited in a landfill permitted by the SCDHEC for receiving ACM. If any concealed and/or inaccessible ACM is encountered during asbestos abatement or renovation activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner/ Abatement Contractor/ Asbestos Consultant for an appropriate response action. The SCDHEC must be notified in the event that any additional ACM is discovered, as well as changes in the condition of identified ACM.

The SCDHEC's Standards of Performance for Asbestos Projects (R 61-86.1) includes requirements for abatement projects regarding notifications, project design, air sampling and analysis, etc. For informational purposes, some of these requirements are summarized below:

Notifications. Written notification (SCDHEC Form 3430) must be submitted to SCDHEC at least two (2) calendar weeks prior to initiation of abatement activities for renovation/demolition projects. A copy of this inspection report and applicable fee payment must be attached to the notification. Additional fees may be required. Copies of all notifications and documents pertinent to the abatement operations must be posted on the job site during abatement work. The Owner/Operators must notify all parties involved with this project of the nature of the work as well as the locations and quantities of asbestos materials to be disturbed or those located near demolition/removal work areas. This notification requirement is also extended to any persons/employees who work near the demolition/removal work areas.

Project Design. Furthermore, abatement projects that will remove more than 3,000 square, 1,500 linear or 656 cubic feet of asbestos-containing materials are required to have a licensed and certified Abatement Project Designer develop a project design prior to the commencement of any abatement activities. The Abatement Contractor is required to adhere to the design, which must address all information as directed by the regulations.

Air Monitoring. The Abatement Contractor is responsible for daily personal air sampling for Abatement Workers in compliance with current OSHA standard 29 CFR 1926.1101. All remaining air monitoring services required for a renovation project (i.e. backgrounds, areas, and clearances) will be provided by the Owner or the Owner's Representative, as required by SCDHEC.

APPENDIX A

Site Vicinity Map (Figure 1)

ACM Sample Location Plan (Figure 2)

Homogeneous Area Plan (Figure 3)



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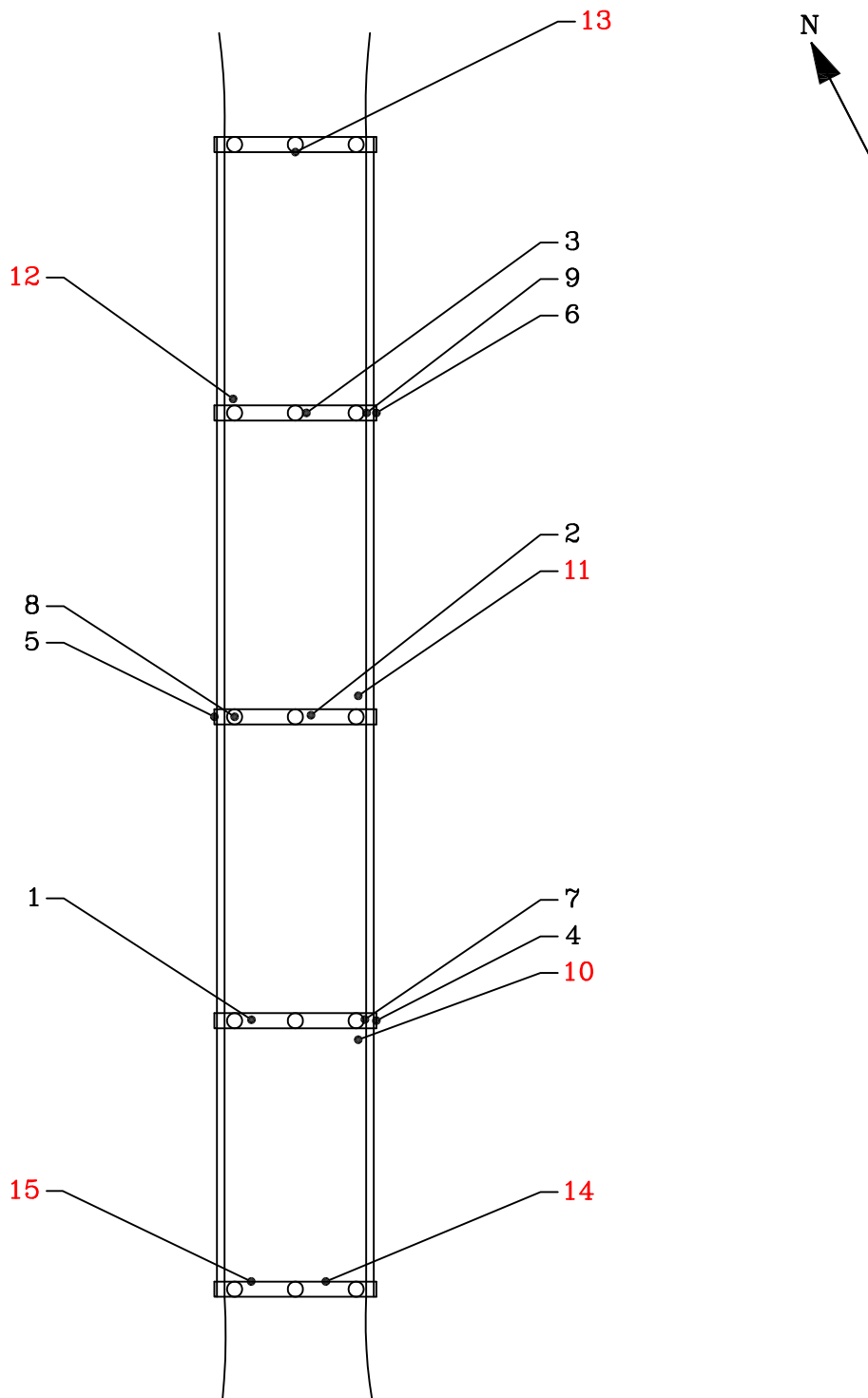
F&ME
CONSULTANTS

SITE VICINITY MAP

SCDOT Bridge #327004800100 (S-32-48 over I-26)
Lexington County, South Carolina

SC DEPARTMENT OF TRANSPORTATION

| | | | |
|--------------|-----|----------|----------|
| Prepared By: | JSL | Scale: | N.T.S. |
| Checked By: | JLS | Project: | E5350.02 |
| Approved By: | GME | Figure: | 1 |



F&ME
CONSULTANTS

SAMPLE LOCATION PLAN
S-32-48 BRIDGE OVER I-26
LEXINGTON COUNTY, SOUTH CAROLINA

S.C. DEPARTMENT OF TRANSPORTATION

DRAWN BY: MSM
CHECKED BY: JLS
APPROVED BY: GME

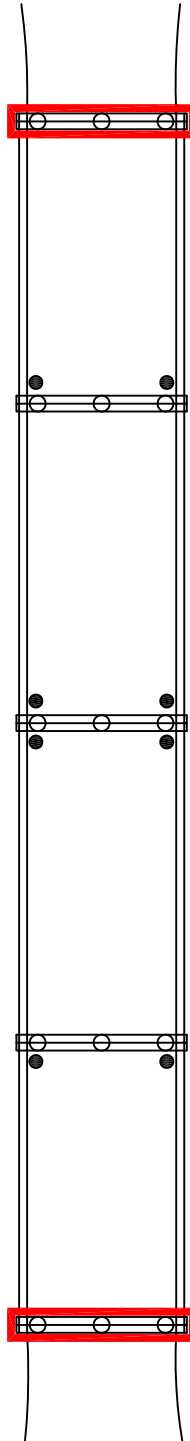
SCALE: N.T.S
PROJECT: E5350.02
FIGURE NO.: 2



HA-1 - Scuppers (Drains)



HA-2 - End Bent Felt Pad



F&ME
CONSULTANTS

HOMOGENEOUS AREA PLAN
S-32-48 BRIDGE OVER I-26
LEXINGTON COUNTY, SOUTH CAROLINA

S.C. DEPARTMENT OF TRANSPORTATION

DRAWN BY: MSM
CHECKED BY: JLS
APPROVED BY: GME

SCALE: N.T.S
PROJECT: E5350.02
FIGURE NO.: 3

APPENDIX B

Summary of Samples (Table I)

Summary of Asbestos Containing Materials (Table II)

Summary of Inspection

Physical Assessment Data Sheets

Bulk Asbestos Analytical Reports

Chain of Custody

TABLE I. SUMMARY OF SAMPLES

| Sample ID | Sample Description |
|------------------|--|
| 1 | Top of Decking Expansion/Crack Seal Material |
| 2 | Top of Decking Expansion/Crack Seal Material |
| 3 | Top of Decking Expansion/Crack Seal Material |
| 4 | Underlying Expansion Joint Material |
| 5 | Underlying Expansion Joint Material |
| 6 | Underlying Expansion Joint Material |
| 7 | Top of Curbing Expansion Joint Material |
| 8 | Top of Curbing Expansion Joint Material |
| 9 | Top of Curbing Expansion Joint Material |
| 10 | Scuppers (Drains) |
| 11 | Scuppers (Drains) |
| 12 | Scuppers (Drains) |
| 13 | End Bent Felt Pad |
| 14 | End Bent Felt Pad |
| 15 | End Bent Felt Pad |
| | |

TABLE I

TABLE II. SUMMARY OF ASBESTOS CONTAINING MATERIALS

| Sample ID | Sample Description | ACM Layer(s) | % Asbestos |
|-----------|--------------------|--------------|--------------------------|
| 10 | Scupper (Drain) | - | 30% Chrysotile |
| | | | 2% Crocidolite |
| 11 | Scupper (Drain) | - | First Stop Positive |
| | | | First Stop Positive |
| 12 | Scupper (Drain) | - | First Stop Positive |
| | | | First Stop Positive |
| 13 | End Bent Felt Pad | - | None Detected |
| 14 | End Bent Felt Pad | - | None Detected |
| 15 | End Bent Felt Pad | - | 3.9% Chrysotile (TEM) |
| | | | |

TABLE II

SUMMARY OF INSPECTION

The following tables summarize the physical assessment data, sampling and assessment results.

As exhibited on these tables, coding is used to abbreviate the asbestos containing materials' (ACM) locations, characteristics and results. These codes are as follows:

TYPES OF ACM:

Misc. = Miscellaneous

Sur. = Surfacing

TSI = Thermal System Insulation

ACM LOCATIONS:

Homogeneous areas = Indicated by Roman Numerals, Room Number or Area Designation

| <u>Functional Space No.:</u> | <u>Functional Space Type:</u> |
|------------------------------|-------------------------------|
| 1. | D = Decking |
| 2. | E = End Bent |

ACM CHARACTERISTICS:

F = Friable

NF = Non-Friable

ASSESSMENT RESULTS:

(Refer to Physical Assessment Data)

POTENTIAL FOR DISTURBANCE:

(Refer to Physical Assessment Data)

PHYSICAL ASSESSMENT CATAGORIES:

1. Damaged or significantly damaged friable thermal system insulation ACM.
2. Damaged friable surfacing ACM.
3. Significantly damaged friable surfacing ACM.
4. Damaged or significantly damaged friable miscellaneous ACM.
5. ACM with potential for significant damage.
6. ACM with potential for damage.
7. Any remaining friable ACM or friable suspect ACM.
8. Non-friable ACM.

CLASSIFICATION FOR HAZARD POTENTIAL:

(Tabular Display)

| <u>Hazard Rank</u> | <u>ACM Condition</u> | <u>ACM Disturbance Potential</u> |
|--------------------|-----------------------|----------------------------------|
| 7 | Significantly Damaged | Any |
| 6 | Damaged | Potential for Significant Damage |
| 5 | Damaged | Potential for Damage |
| 4 | Damaged | Low |
| 3 | Good | Potential for Significant Damage |
| 2 | Good | Potential for Damage |
| 1 | Good | Low |

PHYSICAL ASSESSMENT DATA SHEET

Building: S-32-48 Bridge Over I-26

Functional Space No: 1 **Type:** D **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-1, Scuppers (Drains)

Approximate Amount of Material (SF or LF): ~8 Units

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration X Water X Physical

Description:

Asbestos-containing scuppers are located along the east and west sides of the bridge. Each scupper is approximately 4" in diameter and extends from the top of the bridge deck to the underside of the bridge deck. The bridge has a total of eight (8) scuppers, with four (4) on each side. The exposed portions where this material was sampled appeared to be in good condition.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

| | High | Moderate | Low | Friable ACM |
|---------------------------------|-------------------|-------------------|----------|-------------------|
| Frequency of Potential Contact: | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Influence of Vibration | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Frequency of Air Erosion | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Potential of Water Erosion | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |

Overall Potential Disturbance Rating:

| Potential for Sig. Damage | Potential for Damage | Low Potential for Damage |
|---------------------------|----------------------|--------------------------|
| <u> </u> | <u> </u> | <u>8</u> |

Overall Hazard Rank #:

| Sig. Damaged | Pot. Sig. Damage | Potential Damage | Low Pot. Damage |
|-------------------|-------------------|-------------------|-----------------|
| <u> </u> | <u> </u> | <u> </u> | <u>1</u> |

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the structure.

Signed:

Mike Minay

Date: 3/27/13

PHYSICAL ASSESSMENT DATA SHEET

Building: S-32-48 Bridge Over I-26

Functional Space No: 1 **Type:** D **Location:** (See Homogeneous Area Plan)

Type of Suspect Material: TSI **Surfacing** X **Misc.**

Description: HA-2, End Bent Felt Pad

Approximate Amount of Material (SF or LF): ~100 S.F.

Condition:

Percent Damage: X >0% <10% >10% <25% >25%

Extent of Damage : Localized X Distributed

Type of Damage: X Deterioration X Water X Physical

Description:

The asbestos-containing end bent felt pads are located beneath the two (2) end bents. Due to this material being encapsulated under each end bent, assessment of its complete condition is not possible. The exposed portions where this material was sampled appeared to be in good condition.

Overall Condition Rating: Sig. Damaged Damaged Good X

Potential for Disturbance:

| | High | Moderate | Low | Friable ACM |
|---------------------------------|-------------------|-------------------|----------|-------------------|
| Frequency of Potential Contact: | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Influence of Vibration | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Frequency of Air Erosion | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |
| Potential of Water Erosion | <u> </u> | <u> </u> | <u>X</u> | <u> </u> |

Overall Potential Disturbance Rating:

| Potential for Sig. Damage | Potential for Damage | Low Potential for Damage |
|---------------------------|----------------------|--------------------------|
| <u> </u> | <u> </u> | <u>8</u> |

Overall Hazard Rank #:

| Sig. Damaged | Pot. Sig. Damage | Potential Damage | Low Pot. Damage |
|-------------------|-------------------|-------------------|-----------------|
| <u> </u> | <u> </u> | <u> </u> | <u>1</u> |

Comments: Potential for Disturbance and Hazard Ranking assessed is based on current usage of the structure.

Signed:

Mike Minay

Date: 3/27/13

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

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

greensborolab@emsl.com

EMSL Order: 021301799

CustomerID: FMEC62

CustomerPO: E5350.02

ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205

Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 03/22/13 10:00 AM
Analysis Date: 3/26/2013
Collected:

Project: **I-26 Bridges (Bridge #327004800100 S-32-48 Bridge over I-26) E5350.02****Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

| Sample | Description | Appearance | <u>Non-Asbestos</u> | | <u>Asbestos</u> |
|----------------------|---|--|--------------------------------|--------------------------|--|
| | | | % Fibrous | % Non-Fibrous | % Type |
| 1 021301799-0001 | Top Expansion Joint Material/Crack Sealer | Black Non-Fibrous Heterogeneous | 1% Cellulose | 99% Non-fibrous (other) | None Detected |
| 2 021301799-0002 | Top Expansion Joint Material/Crack Sealer | Black Non-Fibrous Heterogeneous | <1% Synthetic <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| 4 021301799-0003 | Underlying Expansion Joint Material | Brown/Black Fibrous Heterogeneous | 20% Cellulose 1% Synthetic | 79% Non-fibrous (other) | None Detected |
| 5 021301799-0004 | Underlying Expansion Joint Material | Black Fibrous Heterogeneous | 10% Cellulose 1% Synthetic | 89% Non-fibrous (other) | None Detected |
| 7 021301799-0005 | Top of Curb Expansion Joint Material | Gray/Black Non-Fibrous Heterogeneous | <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| 8 021301799-0006 | Top of Curb Expansion Joint Material | Gray/Black Non-Fibrous Heterogeneous | <1% Cellulose | 100% Non-fibrous (other) | None Detected |
| 10 021301799-0007 | Scupper | Gray Fibrous Heterogeneous | | 68% Non-fibrous (other) | 30% Chrysotile 2% Crocidolite |
| 11 021301799-0008 | Scupper | | | | Stop Positive (Not Analyzed) |

Analyst(s)

Kristie Elliott (4)

Nicole Shutts (5)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Initial report from 03/26/2013 15:22:04

**EMSL Analytical, Inc.**

706 Gralin Street, Kernersville, NC 27284

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

greensborolab@emsl.com

EMSL Order: 021301799

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ProjectID:

Attn: **Glynn Ellen**
F & ME Consultants
3112 Divine Street

Columbia, SC 29205

Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 03/22/13 10:00 AM
Analysis Date: 3/26/2013
Collected:

Project: **I-26 Bridges (Bridge #327004800100 S-32-48 Bridge over I-26) E5350.02****Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

| Sample | Description | Appearance | <u>Non-Asbestos</u> | | <u>Asbestos</u> |
|----------------------|-----------------------|-----------------------------------|-------------------------------|-------------------------|------------------------------|
| | | | % Fibrous | % Non-Fibrous | % Type |
| 12 021301799-0009 | Scupper | | | | Stop Positive (Not Analyzed) |
| 13 021301799-0010 | End Bent Cap Felt Pad | Brown/Black Fibrous Heterogeneous | 20% Cellulose 1% Synthetic | 79% Non-fibrous (other) | None Detected |
| 14 021301799-0011 | End Bent Cap Felt Pad | Brown/Black Fibrous Heterogeneous | 30% Cellulose 1% Synthetic | 69% Non-fibrous (other) | None Detected |

Analyst(s)

Kristie Elliott (4)

Nicole Shutts (5)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Initial report from 03/26/2013 15:22:04

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Phone: (803) 254-4540
Fax: (803) 254-4542
Received: 03/22/13 10:00 AM
Analysis Date: 3/27/2013
Collected:

Project: **I-26 Bridges (Bridge #327004800100 S-32-48 Bridge over I-26) E5350.02**

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 021301799-0012 | Top Expansion Joint Material/Crack Sealer | Black Non-Fibrous Homogeneous | 100 | None | No Asbestos Detected |
| 6 021301799-0013 | Underlying Expansion Joint Material | Black Non-Fibrous Homogeneous | 100 | None | No Asbestos Detected |
| 9 021301799-0014 | Top of Curb Expansion Joint Material | Gray /Black Non-Fibrous Heterogeneous | 100 | None | No Asbestos Detected |
| 15 021301799-0015 | End Bent Cap Felt Pad | Tan /Black Fibrous Heterogeneous | 96.1 | None | 3.9% Chrysotile |

Analyst(s)

Stephen Bennett (4)

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 03/27/2013 10:22:39

Chain of Custody

1799

EMSL Analytical, Inc.
706 Gralin Street
Kernersville, NC 27284

Asbestos Lab Services

Phone: (336) 992-1025
Fax: (336) 992-4175
<http://www.emsl.com>

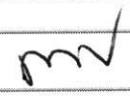
Please print all information legibly.

| | | | |
|-----------------------------|--|-----------------------|--------------------------|
| Company: | F&ME Consultants | Bill To: | F&ME Consultants |
| Address1: | 3112 Devine Street | Address1: | P.O. Box 5855 |
| Address2: | | Address2: | |
| City, State: | Columbia, South Carolina | City, State: | Columbia, South Carolina |
| Zip/Post Code: | 29205 | Zip/Post Code: | 29250 |
| Country: | USA | Country: | USA |
| Contact Name: | Glynn Ellen | Attn: | Jim Kelleher |
| Phone: | 803 254-4540 | Phone: | 803 777-1208 |
| Fax: | 803 254-4542 | Fax: | 803 777-1028 |
| Email: | glynn@fmecol.com | Email: | jkelleher@fmecol.com |
| EMSL Rep: | Jason McDonald | P.O. Number: | E5350.02 |
| Project Name/Number: | I-26 Bridges (Bridge #327004800100 S-32-48 Bridge over I-26)/ E5350.02 | | |

| MATRIX | | | TURNAROUND | | | |
|--|---|------------------------------------|---|---|---|---|
| <input type="checkbox"/> Air | <input type="checkbox"/> Soil | <input type="checkbox"/> Micro-Vac | <input type="checkbox"/> 3 Hours | <input type="checkbox"/> 6 Hours | <input type="checkbox"/> Same Day or 12 Hours* | <input type="checkbox"/> 24 Hours (1day) |
| <input checked="" type="checkbox"/> Bulk | <input type="checkbox"/> Drinking Water | | <input type="checkbox"/> 48 Hours (2 days) | <input checked="" type="checkbox"/> 72 Hours (3 days) | <input checked="" type="checkbox"/> 96 Hours (4 days) | <input type="checkbox"/> 120 Hours (5 days) |
| <input type="checkbox"/> Wipe | <input type="checkbox"/> Wastewater | | <input type="checkbox"/> 144+ hours (6-10 days) | | | |

TEM AIR, 3 hours, 6 hours, Please call ahead to schedule. There is a premium charge for 3-hour tat, please call 1-800-220-3675 for price prior to sending samples. You will be asked to sign an authorization form for this service.

*12 hours (must arrive by 11:00a.m. Mon -Fri.), Please Refer to Price Quote

| <u>PCM - Air</u> | <u>TEM Air</u> | <u>TEM WATER</u> |
|--|---|---|
| <input type="checkbox"/> NIOSH 7400(A) Issue 2: August 1994 | <input type="checkbox"/> AHERA 40 CFR, Part 763 Subpart E | <input type="checkbox"/> EPA 100.1 |
| <input type="checkbox"/> OSHA w/TWA | <input type="checkbox"/> NIOSH 7402 | <input type="checkbox"/> EPA 100.2 |
| <input type="checkbox"/> Other: | <input type="checkbox"/> EPA Level II | <input type="checkbox"/> NYS 198.2 |
| <u>PLM - Bulk</u> | <u>TEM BULK</u> | <u>TEM Microvac/Wipe</u> |
| <input checked="" type="checkbox"/> EPA 600/R-93/116  | <input type="checkbox"/> Drop Mount (Qualitative) | <input type="checkbox"/> ASTM D 5755-95 (quantative method) |
| <input type="checkbox"/> EPA Point Count | <input type="checkbox"/> Chatfield SOP - 1988-02 | <input type="checkbox"/> Wipe Qualitative |
| <input type="checkbox"/> NY Stratified Point Count | <input checked="" type="checkbox"/> TEM NOB (Gravimetric) NYS 198.4 | |
| <input type="checkbox"/> PLM NOB (Gravimetric) NYS 198.1 | <input type="checkbox"/> EMSL Standard Addition: | <u>XRD</u> |
| <input type="checkbox"/> NIOSH 9002: | | <input type="checkbox"/> Asbestos |
| <input type="checkbox"/> EMSL Standard Addition: | <u>PLM Soil</u> | <input type="checkbox"/> Silica NIOSH 7500 |
| <u>SEM Air or Bulk</u> | <input type="checkbox"/> EPA Protocol Qualitative | |
| <input type="checkbox"/> Qualitative | <input type="checkbox"/> EPA Protocol Quantitative | <u>OTHER</u> |
| <input type="checkbox"/> Quantitative | <input type="checkbox"/> EMSL MSD 9000 Method fibers/gram | <input type="checkbox"/> |

APPENDIX C

Photographs



S-32-48 Bridge over I-26





Asbestos-Containing Scuppers (Drains)





Asbestos-Containing End Bent Felt Pads



APPENDIX D

Personnel Certifications

SCDHEC ISSUED
Asbestos ID Card

Michael Mincey

Expires



CONSULTMP

MP-00161 02/15/14

SCDHEC ISSUED

Asbestos ID Card

Glynn M Ellen

Expires



| | |
|------------|--------------------|
| CONSULTMP | ASB-22641 02/15/14 |
| AIRAMPLER | AS-00079 02/25/14 |
| SUPERAMERA | SA-00455 02/25/14 |
| CONSULTPD | PD-00098 06/08/13 |

APPENDIX E

SCDHEC Regulation Summary
SCDHEC Abatement Project Forms

Air Quality

Asbestos - Regulatory Information

RENOVATIONS & DEMOLITIONS

Note: This information should serve as a guide only and is not intended to replace the regulations. For additional information concerning DHEC and EPA regulations, contact DHEC's Asbestos Section at (803) 898-4289. Information regarding the OSHA asbestos standards may be obtained from the South Carolina Department of Labor, Licensing and Regulation at (803) 734-9669.

APPLICABILITY

Renovation and demolition of most facilities, including buildings, structures, and other installations, are subject to State and Federal asbestos regulations. Certain residential buildings may be exempt unless the property was used in the past for non-residential purposes (contact the Asbestos Section for additional information) or is part of a larger development such as highway right-of-way, mall development, urban renewal or other type of similar development. The facility owner and the renovation or demolition contractor are both responsible for ensuring compliance with these regulations.

DEFINITIONS

Renovation means altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material (RACM) from a facility component. "Remodeling" is considered renovation.

Demolition is the wrecking or taking out of any load-supporting structural member of a facility and any related handling operations. Structural burns are prohibited by State Open Burning Regulations.

INSPECTION FOR ASBESTOS

Before a facility or a portion of a facility is renovated or demolished, the owner/operator of the facility or renovation or demolition activity must ensure that the facility or portion of the facility being renovated or demolished has been thoroughly inspected for the presence of asbestos. The inspection must be performed by a person who has been trained and licensed as an Asbestos Building Inspector or management planner in accordance with State training and licensing requirements.

The inspector must identify, quantify, and assess the condition of all suspect asbestos-containing materials, either friable or non-friable, on interior and exterior portions of the facility. The inspector must also comply with the procedures specified in 40 CFR 763.86 in determining sampling locations and the number of representative samples to be collected. In addition, the

inspector is required to prepare a written report detailing the findings of the inspection. At a minimum, the report must include information required in 40 CFR 763.85 (a)(4)(vi)(A)-(E), as well as the date of inspection and the name, license number, and signature of the licensed Asbestos Building Inspector or Management Planner who performed the inspection and completed the report. A legible copy of the building inspection report must be provided to the Department prior to each demolition, and upon request for renovations. (Note: **"BUILDING INSPECTIONS"** can be consulted for a detailed explanation of the aforementioned sampling and reporting protocols.)

A building inspection will only be acceptable if performed **within three years** prior to the demolition or renovation. If an inspection report is more than three years old, then it must be confirmed and verified by a licensed Asbestos Building Inspector or Management Planner.-

FRIABLE ASBESTOS-CONTAINING MATERIALS

If friable asbestos-containing materials (e.g., pipe insulation) are present, they must be removed prior to being disturbed during renovation or demolition activities. Removal (abatement) must be performed by trained, licensed persons using procedures detailed in State and Federal regulations.

A project design must be prepared for each asbestos abatement project involving the abatement of greater than 3,000 square feet, 1,500 linear feet and/or 656 cubic feet of RACM in a facility to be reoccupied. Such designs must be prepared by a person licensed by the Department as an Asbestos Project Designer.

NON-FRIABLE ASBESTOS-CONTAINING MATERIALS

During renovations, removal of non-friable materials (e.g., vinyl-asbestos floor tiles and sheet flooring, mastics, asphaltic roofing, and asbestos-cement siding and roofing tiles) may be regulated. Applicability is dependent upon the removal methods to be used. If it can be anticipated that non-friable materials will be ground, crumbled, sanded, abraded, chipped or pulverized, the removal is subject to the same rules as removal of friable materials.

Prior to any demolition, non-friable asbestos-cement products (e.g., transite siding, exterior siding and roofing shingles) must be removed. Asbestos-containing sheet flooring and floor tiles, as well as asphaltic roofing products, need not be removed if they are in good condition and have not become brittle and are not peeling, cracking, or crumbling. Otherwise, they must also be removed prior to demolition. If it can be anticipated that non-friable materials will be ground, crumbled, sanded, abraded, chipped or pulverized, the materials must be removed and the removal is subject to the same rules as removal of friable materials. The amount of any non-friable asbestos that will remain in place during demolition must also be indicated on the written notification form.

All asbestos-containing materials must be removed if the facility will be demolished by non-standard demolition techniques such as implosion, explosion, or intentional burning.

NOTIFICATION FOR RENOVATIONS AND DEMOLITIONS

Prior to removing regulated asbestos-containing materials, written notification must be submitted to the Department (up to 10 working days in advance, depending on the amount of asbestos to be removed). The notification must include certain required items of information about the owner, the contractor, the facility, and the asbestos removal project. Required fees must be submitted along with the notification. You must obtain a permit from the Department prior to the renovation activity.

Prior to the demolition of any regulated facility, written notification must be submitted to the Department *at least 10 working days* in advance **even if a building inspector determines that asbestos is not present at the facility**. The notification must include certain required items of information about the owner, the contractor, the facility, and the demolition project. Required fees and a copy of the building inspector's report must be submitted along with the notification of demolition. You must obtain a permit from the Department prior to the demolition activity.

DISPOSAL

Never burn any asbestos-containing waste material.

Non-asbestos-containing demolition debris and debris which contains only non-regulated roofing or flooring may be disposed of at a DHEC-approved disposal site for cellulosic or inert waste. Waste consolidation activities involving grinding, cutting, or compacting of non-friable asbestos-containing materials will subject these materials to more stringent State and Federal asbestos disposal regulations.

Regulated asbestos waste must be handled by properly licensed asbestos abatement personnel and disposed of at a landfill permitted to accept regulated asbestos waste. A list of approved landfills may be obtained from the Asbestos Section.

REGULATORY REQUIREMENTS FOR BUILDING INSPECTION

As required by the National Emission Standard for Hazardous Air Pollutants (NESHAP) and SCDHEC Regulation 61-86.1, an owner/operator shall ensure that a building inspection to detect the presence of asbestos-containing materials (ACM) has been performed prior to any renovation or demolition activity at a regulated facility.

Under SCDHEC Regulation 61-86.1, Section VI.A.6., an inspection cannot have been performed more than three years prior to a renovation or demolition activity. If more than three years have elapsed since the most recent inspection, the previous inspection shall be confirmed and verified by a licensed building inspector and/or management planner.

SCDHEC Regulation 61-86.1 requires that all inspections be performed by persons trained and licensed as either a building inspector and/or management planner. In order to be licensed in these disciplines, persons must have successfully completed a Department approved initial training course specific to inspecting for ACM in a building and/or a course specific to

management planning for ACM in a building. Persons must also have taken and passed an examination at the end of the course with a score of 70 percent or above.

In performing inspections, SCDHEC Regulation 61-86.1 requires that a building inspector and/or management planner comply with the requirements of Section VI, Asbestos Building Inspection Requirements. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

In performing inspections, SCDHEC Regulation 61-86.1 requires that a building inspector and/or management planner follow specific sampling procedures. According to Section IV.B.3.a of the regulation, a building inspector and/or management planner shall comply with the procedures specified in **40 CFR 763.86** in determining sampling locations and the number of representative samples to be collected. An inspection shall include samples from suspect friable and non-friable ACM on interior and exterior portions of a facility or its facility components.

Under 40 CFR Part 763.86, suspect ACM are divided into three categories: surfacing materials, thermal system insulation (commonly referred to as TSI), and miscellaneous materials. SCDHEC Regulation 61-86.1, Section VI contains sampling procedures specific to each category of material.

Surfacing material includes, but is not limited to, joint compound, plaster, and painted, troweled on, or spray-applied textured material. To remain in compliance with SCDHEC Regulation 61-86.1, surfacing materials on exterior and interior portions of a facility shall be sampled according to procedures outlined in SCDHEC Regulation 61-86.1, Section VI.D.1. (a)-(c):

- A licensed asbestos inspector shall collect, in a statistically random manner, a minimum of three bulk samples from each homogeneous area of any surfacing that is not assumed to be ACM, and shall collect the samples as follows:
 - At least three bulk samples shall be collected from each homogeneous area that is 1,000 or fewer square feet (sf) or linear feet (Lf) in size.
 - At least five bulk samples shall be collected from each homogeneous area that is greater than 1,000 but fewer than or equal to 5,000 sf or Lf.
 - At least seven bulk samples shall be collected from each homogeneous area that is greater than 5,000 sf or Lf.

Thermal system insulation (TSI) is any material that is applied to pipes, fittings, boilers, breeching, tanks, ducts, or other facility components for the purpose of preventing heat loss or gain, water condensation, or for other purposes. **Miscellaneous Material** is any material that is not considered a surfacing material or thermal system insulation and includes, but is not limited to, flooring, roofing, mastics, gaskets, cementitious materials, caulking, ceiling tiles, fire doors, wall boards, and flexible duct connections. To remain in compliance with SCDHEC Regulation 61-86.1, TSI and miscellaneous materials on exterior and interior portions of a facility shall be sampled in accordance with procedures outlined in SCDHEC Regulation 61-86.1, Section VI.D.2:

- A licensed asbestos inspector shall collect, in a statistically random manner, at least three bulk samples from each homogeneous area of TSI and any miscellaneous material that is not assumed to be ACM.
- In accordance with ASTM E2356, and any subsequent amendments and editions, negative results for non-friable organically bound materials (NOB) shall be verified with at least one TEM analysis.
- NOBs include flooring, roofing, mastics, adhesives, caulks, and glazing.
- If an accredited inspector has determined the thermal system insulation to be fiberglass, foam glass, rubber, or other non-suspect material, then bulk samples are not required.

SCDHEC Regulation 61-86.1, Section VI.C requires that a building inspector and/or management planner prepare a written asbestos building inspection report to include the following:

- A title page denoting: (1) The client's name, company, address, and telephone number, and the name and exact location of the facility inspected; (2) the date the inspection was performed; (3) the date the inspection report was written; and (4) the printed name and telephone number of the inspector(s), and his or her affiliated company name, address, and telephone number.
- A cover letter to the building owner or owner's representative that describes the purpose of the inspection; a general synopsis of the inspection and results; and the name, title, and signature of the inspector(s) and report writer, if different.
- A detailed narrative of the physical description of the building or part of the building affected by the renovation or demolition operation that includes: (1) The square footage of the building or part of the building affected by the renovation or demolition operation; (2) The building materials used in the construction of the exterior, roof, interior, and basement or crawlspace of the building affected by the demolition or affected by the renovation materials operation; (3) An estimated or exact quantity (square or linear feet) for all suspect materials whether sampled for or assumed to be asbestos that may be affected by the renovation or demolition operation; (4) Also include a description of non-suspect materials excluding: glass, metals, kiln brick, cement, fiberglass, concrete, pressed wood, cinder block, and rubber.
- An executive summary that details: (1) The type of suspect ACM (e.g., TSI, floor tile, mastic), total square or linear footage, and the total number of samples collected for each separate homogenous area affected by the renovation or demolition operation; (2) The date of the inspection, type, condition, quantity, sample results, and exact location of ACM positively identified or assumed to be ACM in the part of the building affected by the renovation or demolition operation; (3) A list of the homogeneous areas identified; (4) Whether the material is accessible for the building or part of the building affected by the renovation or demolition operation; and (5) The material's potential for disturbance for the building or part of the building affected by the renovation or demolition operation.
- For renovation and demolition operations, the inspector's determination that ACM is friable or non-friable.
- Except when suspect ACM materials are assumed to be asbestos, include a complete, clear, legible copy of all laboratory bulk sample results.

- Clear, legible drawings and/or photographs to clarify the scope of the renovation or demolition operation. Illustrate the exact location of each sample collected. For facilities that involve a trade secret or confidential component or an affected area process, a request for a variance may be submitted.
- The printed name and signature of each accredited inspector who collected the samples, and a clear legible copy of his or her Department issued asbestos building inspector or management planner license



ASBESTOS ABATEMENT PROJECT LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Standard Removal ☐ Emergency Removal ☐ Enclosure ☐ Encapsulation ☐ Cleanup ☐ Disposal

FOR OFFICE USE

Postmark/Received: _____

Original ☐ / Revised ☐ / Cancellation ☐ (check one)

Project License I.D. (For Revisions/Cancellations): _____

I. FACILITY OWNER: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

II. REMOVAL CONTRACTOR: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

E-MAIL ADDRESS: _____ E-MAIL PERMIT ☐ OR MAIL PERMIT ☐

FEDERAL I.D. NUMBER: _____

DHEC CONTRACTOR LICENSE NO. (If applicable): _____ EXPIRATION DATE: _____

III. FACILITY NAME: _____

STREET ADDRESS: _____

CITY: _____ STATE: _____ COUNTY: _____

SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____

BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____

PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

IV. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:

FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____

COMPANY: _____ PHONE: (____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

V. PROJECT DESIGN PERFORMED BY (IF APPLICABLE): _____

COMPANY: _____ PHONE: (____) _____

DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. ASBESTOS-CONTAINING MATERIALS (ACM) **TO BE REMOVED ONLY:**

| TYPE (TSI, SURFACING, FLOORING, ROOFING, ETC.) | AMOUNT (SQUARE FEET, LINEAR FEET, CUBIC FEET) | CONDITION (CIRCLE ONE) |
|--|---|---|
| | | <input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE |
| | | <input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE |
| | | <input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE |
| | | <input type="checkbox"/> FRIABLE <input type="checkbox"/> NON-FRIABLE |

VII. SCHEDULED DATES OF REMOVAL: START DATE: _____ COMPLETION DATE: _____

WORK DAYS: _____ WORK HOURS: _____

**APPLICATIONS MUST BE SUBMITTED WITH FEES
PRIOR TO THE SCHEDULED START DATE AS FOLLOWS:**

NESHAP PROJECTS: 10 WORKING DAYS

SMALL PROJECTS: 4 WORKING DAYS

MINOR PROJECTS: 2 WORKING DAYS

**FEE SCHEDULE FOR FRIABLE ASBESTOS-CONTAINING
MATERIALS:**

10 CENTS PER SQUARE FOOT OR LINEAR FOOT

MINIMUM FEE OF \$25.00

MAXIMUM FEE OF \$1000.00

Non-Friable (NESAP-sized) Projects: 4 working days. No fee for non-friable ACM.

For additional information concerning regulatory requirements call or visit our Web site at <http://www.scdhec.gov/environment/baq/asbestos.aspx>

VIII. DESCRIPTION OF PLANNED ABATEMENT WORK & METHOD(S) TO BE USED:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE RENOVATION SITE:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (____) _____

TEMPORARY ASBESTOS STORAGE CONTAINMENT AREA LICENSE NUMBER (IF APPLICABLE): _____

XII. DESCRIPTION OF EMERGENCY REMOVAL (PLEASE ATTACH A LETTER FROM THE FACILITY OWNER EXPLAINING THE NATURE OF THE EMERGENCY)

DATE & HOUR OF EMERGENCY (MM/DD/YY): _____

DESCRIPTION OF SUDDEN, UNEXPECTED EVENT:

EXPLANATION OF HOW THE EVENT CAUSED UNSAFE CONDITIONS AND/OR WOULD CAUSE EQUIPMENT DAMAGE AND/OR AN UNREASONABLE FINANCIAL BURDEN:

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED OR REDUCED TO POWDER:

XIV. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

_____/_____
(SIGNATURE OF OWNER/OPERATOR) (DATE)

XIV. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

_____/_____
(SIGNATURE OF OWNER/OPERATOR) (DATE)



DEMOLITION LICENSE APPLICATION

BUREAU OF AIR QUALITY • ASBESTOS SECTION • 2600 BULL STREET • COLUMBIA • SC • 29201

TYPE OF OPERATION: ☐ Total Demolition ☐ Partial Demolition ☐ Ordered Demolition

FOR OFFICE USE

Postmark/Received: _____

Original/Revised/Cancellation (circle one)

Project License I.D. (For Revisions/Cancellations): _____

I. FACILITY OWNER: _____
 MAILING ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 CONTACT PERSON: _____ PHONE: (____) _____

II. IS ASBESTOS PRESENT IN THE FACILITY?: YES ☐ / NO ☐ (check one)

III. DEMOLITION CONTRACTOR: _____ FEDERAL ID NO.: _____
 MAILING ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 CONTACT PERSON: _____ PHONE: (____) _____
 E-MAIL ADDRESS: _____ E-MAIL PERMIT ☐ OR MAIL PERMIT ☐
 FEDERAL I.D. NUMBER: _____
 ASBESTOS REMOVAL CONTRACTOR (If applicable): _____
 MAILING ADDRESS: _____
 CITY: _____ STATE: _____ ZIP: _____
 CONTACT PERSON: _____ PHONE: (____) _____

IV. FACILITY NAME: _____
 STREET ADDRESS: _____
 CITY: _____ STATE: _____ COUNTY: _____
 SITE (ROOM, FLOOR, WING, UNIT, MACHINE, ETC.): _____
 BUILDING SIZE: _____ NO. OF FLOORS: _____ AGE IN YEARS: _____
 PRESENT USE: _____ PRIOR USE: _____ FUTURE USE: _____

V. PROCEDURES, INCLUDING ANALYTICAL METHOD IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL:
 FACILITY OR FACILITY COMPONENT SURVEYED BY (INSPECTOR NAME): _____
 COMPANY: _____ PHONE: (____) _____
 DHEC LICENSE NUMBER: _____ EXPIRATION DATE: _____

VI. NON-FRIABLE MASTIC, GLUE, AND ADHESIVE ASBESTOS-CONTAINING MATERIALS **REMAINING IN PLACE DURING DEMOLITION** (IF APPLICABLE):

| TYPE (MASTIC, GLUE, AND ADHESIVE) | AMOUNT (SQUARE FEET) |
|-----------------------------------|----------------------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

VII. SCHEDULED DATES OF DEMOLITION (YOU MUST SPECIFY DATES):
 START DATE: _____ COMPLETION DATE: _____
 WORK DAYS: _____ WORK HOURS: _____

- **Applications must be mailed along with a \$50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.**
- **A copy of an asbestos survey report (no older than 3 years) must accompany the application.**

For additional information concerning regulatory requirements call or visit our Web site at <http://www.scdhec.gov/environment/baq/asbestos.aspx>

VIII. DESCRIPTION OF PLANNED DEMOLITION METHOD(S) TO BE USED:

☐ BULLDOZER ☐ LOADER ☐ WRECKING BALL ☐ MANUAL ☐ BURNING ☐ IMPLOSION/EXPLOSION

IF OTHER PLEASE DESCRIBE:

IX. DESCRIPTION OF WORK PRACTICES & ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION SITE:

X. WASTE TRANSPORTER #1: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

WASTE TRANSPORTER #2: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

XI. WASTE DISPOSAL SITE: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

CONTACT PERSON: _____ PHONE: (_____) _____

XII. IF DEMOLITION ORDERED BY GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW: (PLEASE ATTACH A COPY OF THE ORDER)

NAME: _____ TITLE: _____

AUTHORITY: _____

DATE OF ORDER (MM/DD/YY): _____ DATE ORDERED TO BEGIN(MM/DD/YY): _____

XIII. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED, OR REDUCED TO POWDER:

XIV. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION INVOLVING RACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)

XV. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(SIGNATURE OF OWNER/OPERATOR)

(DATE)

- **Applications must be mailed along with a \$50.00 fee (payable to SCDHEC) at least 10 working days prior to the scheduled start date. Faxes will not be accepted.**
- **A copy of an asbestos survey report (no older than 3 years) must accompany the application.**

For additional information concerning regulatory requirements call or visit our Web site at <http://www.scdhec.gov/environment/baq/asbestos.aspx>



Asbestos Waste Shipment Record

1. SCDHEC ASBESTOS ABATEMENT PROJECT LICENSE:

Generator Information

| | | |
|--|---|---|
| 2. Waste Generator/Owner Name & Address: | Work Site Name & Physical Address: | Waste Generator/Owner Telephone Number () |
| 3. Abatement Contractor Name & Address: | | Abatement Contractor Telephone Number () |
| 4. Name of waste disposal site (WDS), mailing address, and physical site location: | | WDS Telephone Number: () |
| 5. Description of Waste Materials (please circle): Friable (Regulated) / Nonfriable (Nonregulated) | 6. Bags of Containers: No. Type _____ Drums _____ Bags _____ Bulk Load | 7. Total Quantity: m3 (yd3) |
| | | |
| 8. Special handling instructions & additional information: | | |
| 9. Generator's/Contractor's Certification: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled. The contents are in all respects in proper condition for transport by highway according to applicable international and government regulations. | | |

Print Name:

Signature:

Date:

Transporter Information (Acknowledgment of Receipt of Materials):

| | | |
|---|------------|-------|
| 10. Name, title, address, telephone number: | Signature: | Date: |
| 11. Name, title, address, telephone number: | Signature: | Date: |

Disposal Site Operator

| | | |
|---|---------------------------|-----------------------|
| 12. Discrepancy: | <u>Bags or Containers</u> | <u>Total Quantity</u> |
| 13. Waste Disposal Site Owner or Operator certification of receipt of asbestos materials covered by this manifest except as noted in item 11. | | |
| Print Name: | Signature: | Date: |

Please forward a completed copy of this record to: SCDHEC, Bureau of Air Quality, Asbestos Section, 2600 Bull Street, Columbia, SC 29201
(803) 898-4389 office. (803) 898-4281 fax.