

University of South Carolina, School of Medicine

USC SOM BUILDING 661 FIRST FLOOR BATHROOMS

6311 Garners Ferry Road, Columbia, South Carolina

USC Project Number: FP0000091

June 8, 2018

ADDENDUM NO. 1

This addendum forms a part of the Contract documents and modifies the original Bidding Documents and any previous Addenda as noted below. Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

ATTACHMENT:

1. See attached sign-in sheet.

MODIFICATIONS TO PROJECT MANUAL:

1. According to the Attorney General, effective immediately, the Iran Divestment Act clauses will no longer be included in our bid documents and contracts.
 - a. SCOSE AIA A701-1997, Delete section 2.1.10
 - b. SCOSE AIA A201-2007, Delete section 5.2.6
2. ADD Asbestos Containing Material Investigation Report by F&ME dated April 6, 2018. Contractor to abate any material as required to complete the work.
3. ADD Lead Paint Containing Material Investigation Report by F&ME dated April 6, 2018. Contractor to remove any material required to complete the work.

Clarifications:

1. Bid Closing time has been revised to 3:30 pm on June 13, 2018, same location.

**MODIFICATIONS TO DRAWINGS:
ARCHITECTURAL DRAWINGS:**

None

REQUESTED PRODUCT APPROVALS:

None

QUESTIONS FROM CONTRACTORS:

1. Question: Are we required to have boiler/machinery insurance? Are we required to have builders' risk insurance?
 - a. **Answer: From USC Procurement, "The Contractor needs to provide Certificate of Liability Insurance and the Builders Risk (the boiler/machine insurance is if the scope calls for that type of work)."**
2. Question: Does the millwork have to be AWI certified or can it be AWI quality?
 - a. **Answer: See specification section 064116 - plastic-laminate-faced architectural cabinets for requirements.**
3. Question: What is the seismic rating of the ceilings?
 - a. **Answer: Seismic Design Category D for ceilings and all other work to be completed in the project**
1. Question: Can we use the bathroom facilities in the building while work is being completed?
 - a. **Answer: No, provide toilets for construction workers separate from the students and USC employees.**

END OF ADDENDUM NO. 1

University of South Carolina
Pre Bid Sign In Sheet
 Columbia, South Carolina

USC SOM Bldg. 1 First Floor
 Bathroom Renovation
 FP00000091
 June 5, 2018 10:00am

Project Name:
 Project Number:
 Pre Bid Date & Time:

SWM/BE Contractor?	Name	Company Name	Address	Phone #	Email
S W M B E	Hatice Hikmet	USC	1300 Pickens St.	803-777-9994	hikmeth@mailbox.sc.edu
S W M B E	JACK SPEHR	MIRACLE METHOD	4502 RIVERSIDE CHARLESTON	843-817-4200	jack.spehr@outlook.com
S W M B E	DAVID TRULOCK	MAILON CONSTRUCTION	89 MILL CREEK HWY 06/A 29209	803-609-0538	David@mailonconstruction.com
S W M B E	PETE FISHER	USC	1300 PICKENS ST.	803-777-9994	pfisher@usc.sc.edu
S W M B E	Larry Knott	USC SOM		803-622-9949	larry.knott@uscmed.sc.edu
S W M B E	Rick Campbell	USC Som	106 Angoy Rd BURNING 25015	803-528-8167	rick.campbell@uscmed.sc.edu
S W M B E	Matthew Peull	Pack Men Gen Tractor	1224 Two Notch Rd	800-363-0734 803	packmen@yahoo.com
S W M B E	Dennis Childs	AOS SPECIALTY CONTRACTORS		798-6831	dennis@aossc.org
S W M B E	Weslyes	STUDIO 2LR	2428 MAIN ST.	803-233-6602	weslyes@studio2lr.com
S W M B E					
S W M B E					
S W M B E					

***By signing this sheet you agree to receive information electronically.

ASBESTOS CONTAINING MATERIAL INVESTIGATION REPORT

**USC SCHOOL OF MEDICINE
BUILDING 1 - FIRST FLOOR
BATHROOM RENOVATIONS
6439 GARNERS FERRY ROAD
COLUMBIA, SOUTH CAROLINA**

PREPARED FOR:



**UNIVERSITY OF
SOUTH CAROLINA**

Mr. Pete Fisher
University of South Carolina
1300 Pickens Street
Columbia, South Carolina 29201

PREPARED BY:

F&ME Consultants
1825 Blanding Street
Columbia, South Carolina 29201

April 6, 2018

F&ME Project No.: E5700.200

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Appendix D – Summary of Samples

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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. (F&ME) has completed an Asbestos Containing Material (ACM) Investigation of the first-floor bathrooms located in USC School of Medicine's, Building 1. The investigation was performed in anticipation of a planned renovations of the existing bathrooms and was conducted in accordance with South Carolina Department of Health and Environmental Control (SCDHEC), 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 and/or renovation activities.

Per an agreed upon scope of work, F&ME performed this Investigation to identify ACM that may be encountered during renovations, and to make recommendations regarding proper handling and disposal of any ACM found. The scope of work included a limited investigation specific to the building materials found in the interior both bathrooms only. The field investigation was performed on March 29th, 2018.


The ACM investigation uncovered multiple suspect materials that will be impacted by the planned renovations. Laboratory analysis determined that all suspect materials identified and sampled during the investigation **do not contain asbestos**. However, due to the age of the building along with the building containing known ACM materials (i.e. olive duct mastic, black duct mastic, block TSI), suspect materials may be hidden behind existing walls, in chases and behind mirrors. If any additional suspect materials are uncovered during the renovation, the contractor is to stop work and notify the owner or F&ME so that samples can be taken and sent off for analysis.

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



Michael S. Mincey
Environmental Professional
Asbestos Consultant/ Management Planner
SCDHEC License No: MP-00161
Expiration Date 01/29/2019



Glynn M. Ellen
Environmental Manager
Asbestos Consultant/ Management Planner
SCDHEC License No: MP-20979
Expiration Date 1/29/2019

2. INTRODUCTION

It is F&ME's understanding that a planned renovation will include a complete removal of all finishes within the interior of the existing first floor bathrooms (men's and women's). Therefore, the scope of this ACM Investigation was to identify, assess and sample materials suspected of containing asbestos within the interior of both bathrooms to be impacted by the renovations. The field investigation was performed on March 29th, 2018.

The results, conclusions and recommendations from this investigation are representative of the conditions observed at the site on the dates 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 USC and shall not be disseminated in whole or part to other parties without prior consent from USC or F&ME Consultants, Inc. No other environmental issues were addressed as part of this report.

3. EXISTING BUILDING STRUCTURE

The first floor men's and women's bathrooms are located in hallway (H-103) of Building 1 on the campus of USC's School of Medicine. The women's bathroom (276 SF) and the men's bathroom (261 SF) are constructed with masonry block, brick, concrete and steel structural columns, wood and steel framing. The original construction date of the building dates back to the early 1930's. Since then, Building 1 has undergone multiple renovations over the years with the most recent renovation taking place in the early 1980's.



Photo 1. University of South Carolina, School of Medicine Building 1, First Floor Bathroom.

The interior finishes include plaster and drywall walls, ceramic wall and floor tile, , stall partitions, a suspended ceiling system with multiple sinks and toilets. See Appendix A – Site Vicinity Map, for the location of the structure. See Appendix B –General Building Plans, for a layout of the building.

4. FIELD ASSESSMENT

The purpose of this Investigation was to locate, sample and record the physical characteristics of suspect ACM associated with the interior finishes of both bathrooms in anticipation of planned

renovation activities. During the field assessment, all interior building components were visually inspected for suspect ACM. Once reviewed, the quantities and physical condition of suspect materials were assessed, and bulk samples of these materials were submitted for laboratory analysis.

4.1 Suspect Materials

The purpose of this investigation was to locate, sample and record the physical characteristics of suspect ACM associated with the interior areas of the bathroom spaces. Therefore, the quantities (specific to the renovation area) and physical condition of suspect materials were assessed, and bulk samples of these materials were submitted for laboratory analysis. The following suspect materials and approximate amounts were identified during this ACM Investigation:

- Plaster (<1,000 ft²)
- Drywall/Joint Compound (<1,000 ft²)
- 2' x 4' Ceiling Tiles (~540 ft²)
- Gray Duct Mastic (~10 ft²)
- White Caulk (~2 ft²)

Random samples of the suspect materials were collected for laboratory analysis, and their physical characteristics were recorded. Building materials such as concrete, metal, wood, brick, carpet, etc., were not considered suspect ACM. 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 SCDHEC regulations effective May 27, 2011. See Appendix D – Summary of Samples, for complete list of all samples taken. Proper sampling and chain-of-custody protocols were followed to ensure appropriate handling and delivery of samples to the analytical laboratory. Refer to Appendix G –Personnel Certifications, for SCDHEC qualifications of Investigation personnel, and Appendix F– Chain of Custody Forms, for documentation of proper handling and delivery of samples.

5. ASSESSMENT RESULTS

A total of fifteen (15) samples were collected from the subject spaces. A “*first positive stop*” protocol was implemented for this sampling. 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. Therefore, due to multiple layers of some materials sampled, and the implementation of a “*first positive stop*” protocol, nineteen (19) samples were analyzed

by PLM and two (2) were TEM-confirmed. Laboratory analysis determined that all suspect materials identified and sampled during the investigation do not contain asbestos. See Appendix C –Sample Location Plan, for the various sample locations.

Appropriate sampling and chain-of-custody protocols were followed to ensure proper handling and delivery of samples to the analytical laboratory. Appendix E – Bulk Asbestos Analytical Report and Appendix F – Laboratory Chain of Custody were provided to show laboratory documentation of the analytical results. Appendix G – Personnel Certification, provides the qualifications for the F&ME Asbestos Inspectors.

6. RECOMMENDATIONS

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

If any concealed and/or inaccessible ACM are encountered during renovation activities, the affected contractor(s) must stop work, take appropriate actions, and notify the Owner or the Owner’s Environmental consultant for an appropriate response action. The SCDHEC must be notified in the event any ACM is discovered, as well as changes in the condition of identified ACM.

This report has been prepared exclusively for USC School of Medicine and F&ME and shall not be disseminated in whole or in part to other parties without prior consent from USC School of Medicine or F&ME. Use of this document for bidding purposes is not recommended without prior consultation with F&ME.

APPENDICES

Appendix A – Site Vicinity Map

Appendix B – General Building Plans

Appendix C – Sample Location Plans

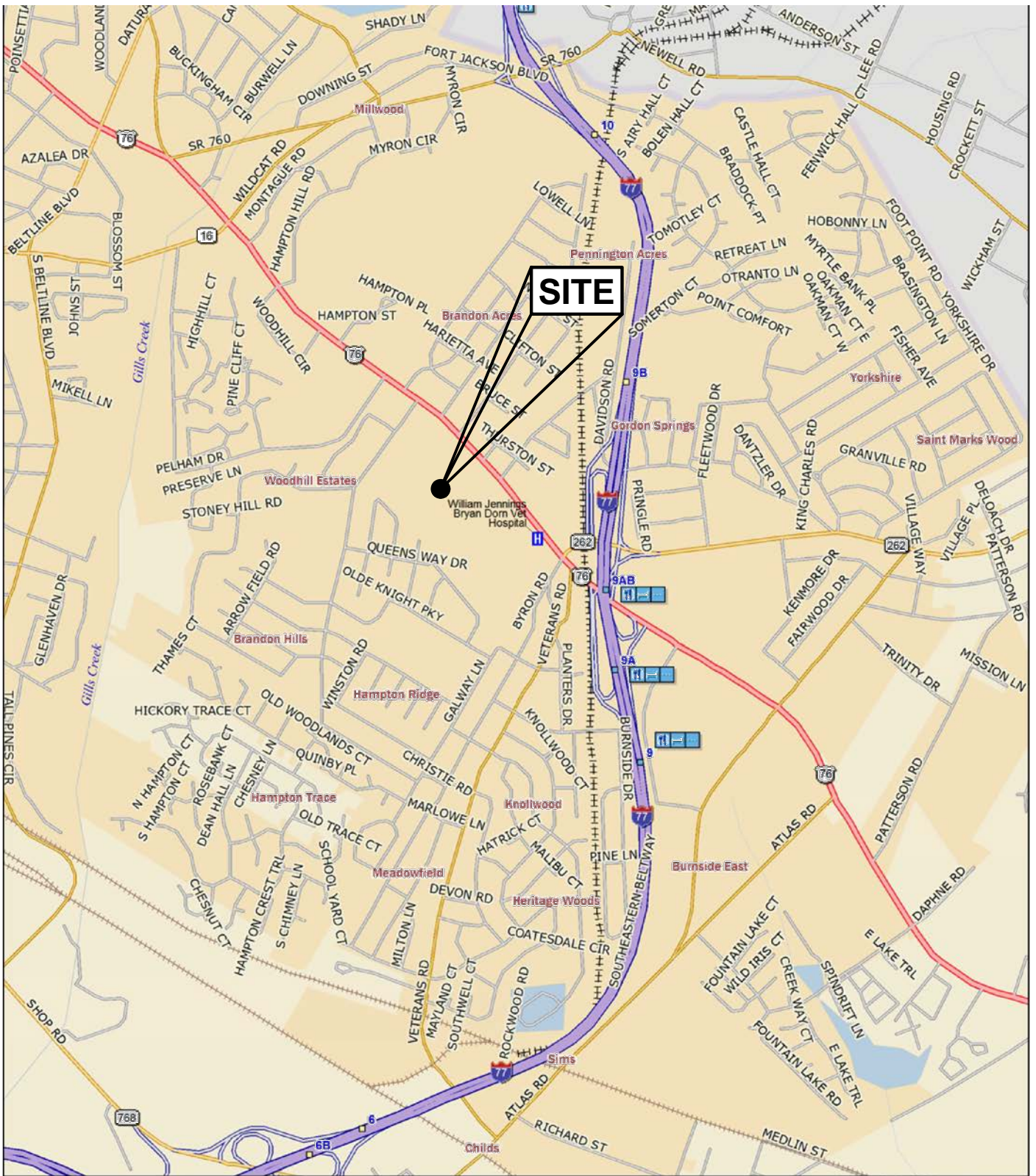
Appendix D – Summary of Samples

Appendix E – Laboratory Analysis Reports

Appendix F – Chain of Custody Forms

Appendix G – Personnel Certifications

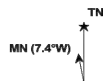
Appendix A
Site Vicinity Map



Data use subject to license.

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www.delorme.com



Scale 1 : 25,000



1" = 2,083.3 ft Data Zoom 13-0

FIGURE NUMBER:

1

F&ME CONSULTANTS PROJECT NUMBER:

E5700.2000

**Asbestos Containing Materials Investigation
USC School of Medicine Building 1 - 1st Floor Bathroom
Renovation**

6439 Garners Ferry Rd., Columbia, SC
Appendix A - Site Vicinity Map

Prepared for:
Facilities Planning and Construction
743 Greene Street
Columbia, SC 29208

**F&ME
CONSULTANTS**
3112 Devine Street
Columbia, SC 29205

ORIGINAL:
April 4, 2018

REVISIONS:
1 _____
2 _____
3 _____

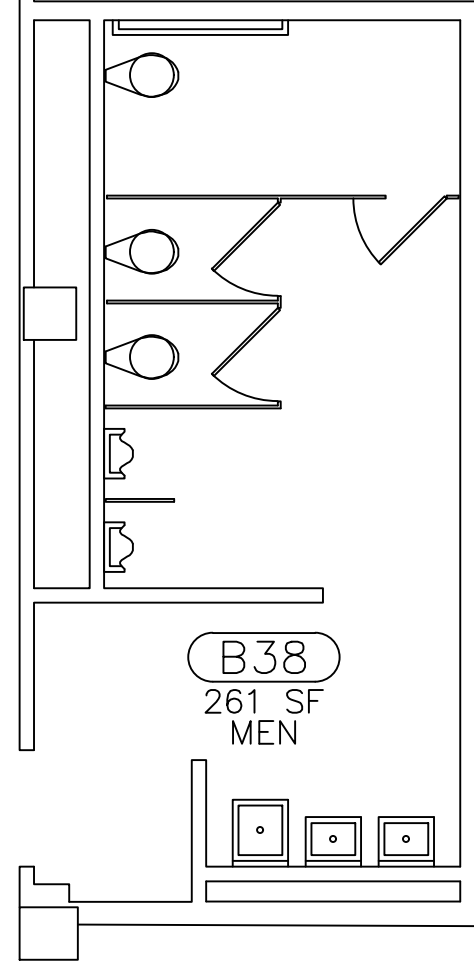
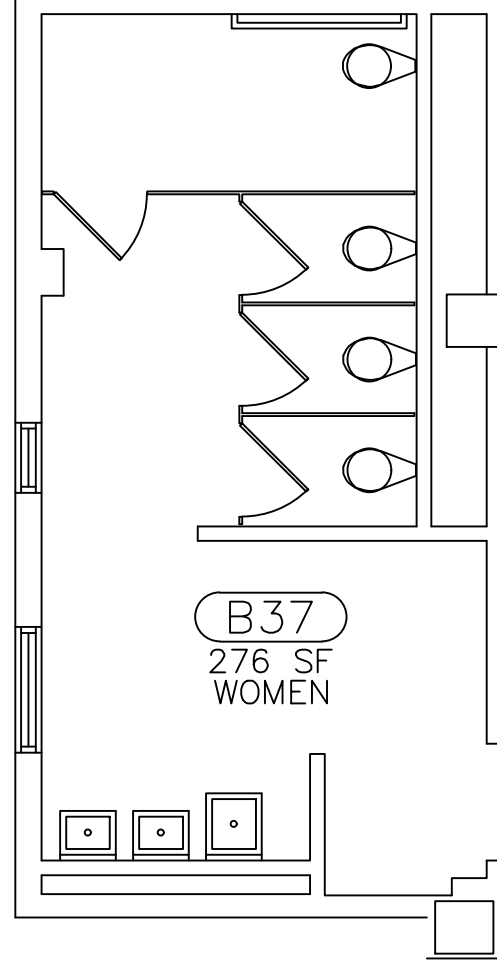
SCALE
As Shown

DRWN. BY: CTC
CHKD. BY: MSM
APPR. BY: GME

NOTES:

Appendix B

General Building Plans



F&ME CONSULTANTS
PROJECT NUMBER:

E5700.200

Asbestos Containing Materials Investigation
USC School of Medicine Building 1 - 1st Floor Bathroom
Renovation

6439 Garners Ferry Rd., Columbia, SC
Appendix B - General Building Plan

Prepared for:
Facilities Planning and Construction
743 Greene Street
Columbia, SC 29208

F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
3112 Devine Street
COLUMBIA, SC 29205

ORIGINAL:
April 4, 2018

REVISIONS:

1 _____
2 _____
3 _____

NOTES:

SCALE
3/16" = 1'

DRAWN BY: MSM

CHECKED BY: MSM

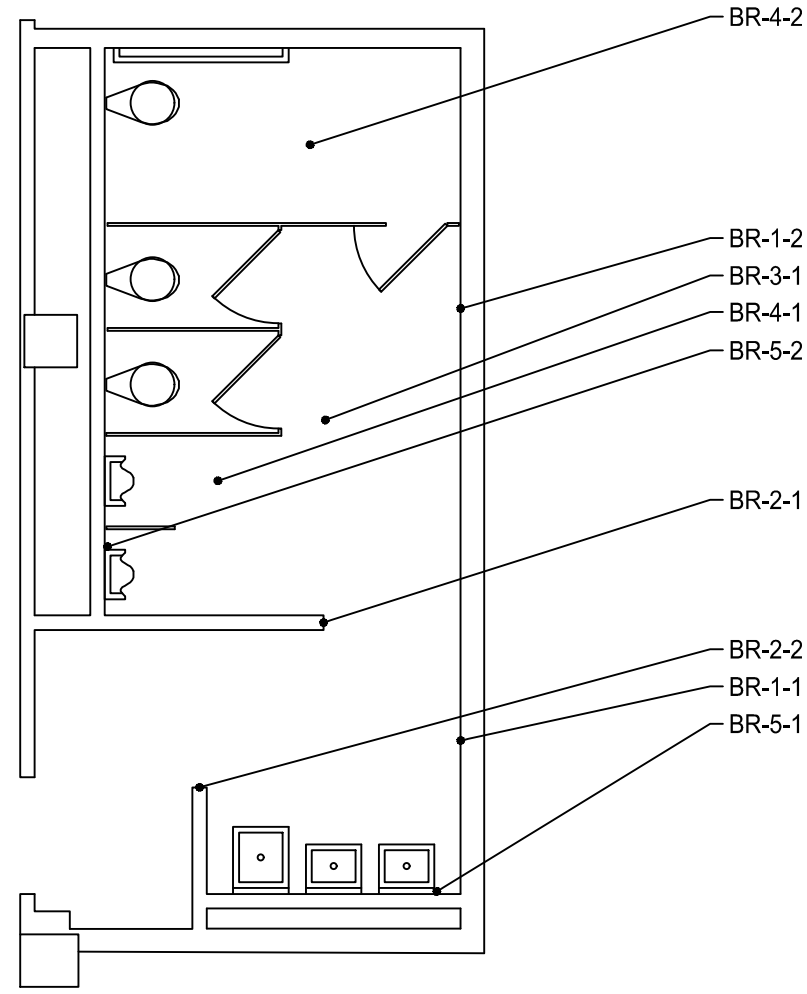
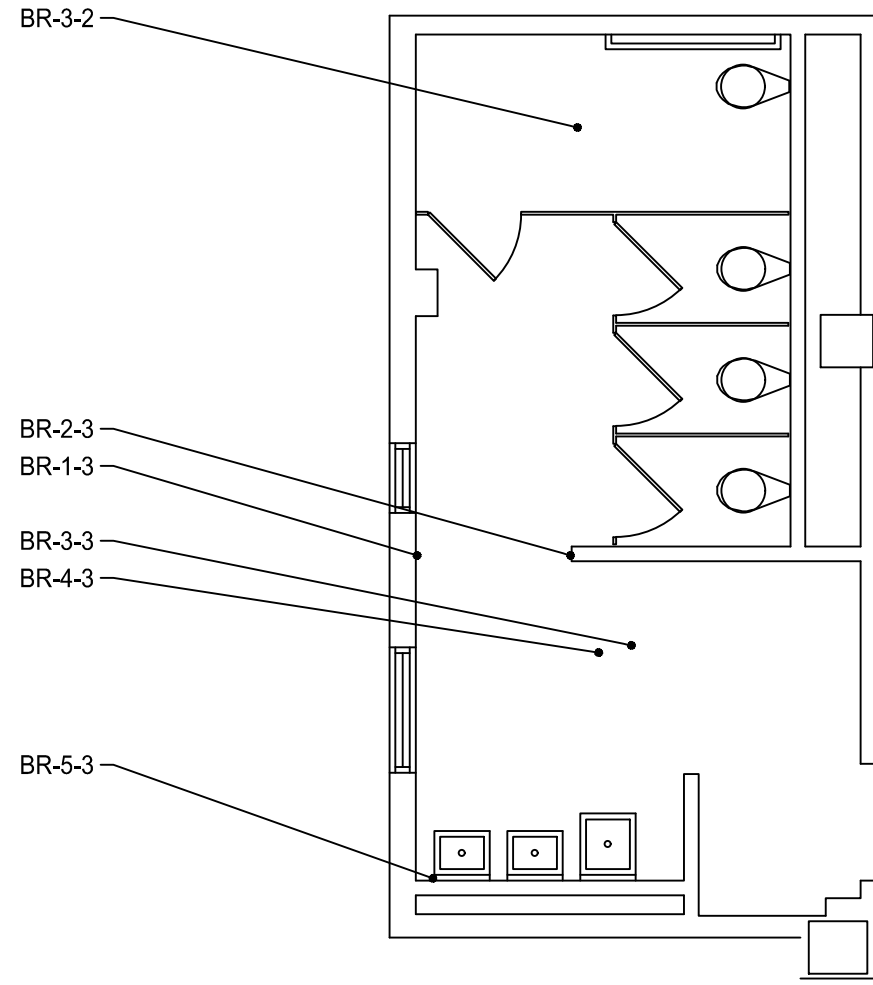
APPROVED BY: GME

FIGURE NUMBER:

2

Appendix C

Sample Location Plans



F&ME CONSULTANTS
PROJECT NUMBER:

E5700.200

FIGURE NUMBER:

3

Asbestos Containing Materials Investigation
USC School of Medicine, Bld. 1 - Bathrooms Renovation
6439 Gamers Ferry Rd., Columbia, SC 29201
Appendix B - Sample Location Plan

Prepared for:
Facilities Planning and Construction
743 Greene Street
Columbia, SC 29208

F&ME
CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
3112 Devine Street
COLUMBIA, SC 29205

ORIGINAL:	April 4, 2018
REVISIONS:	
1	
2	
3	
SCALE	3/16" = 1'
DRWN BY: MSM	
CHKD BY: MSM	
APPR BY: GNE	
NOTES:	

Appendix D

Summary of Samples

Appendix E: Summary of Samples

Sample ID	Description
BR-1-1	Plaster
BR-1-2	Plaster
BR-1-3	Plaster
BR-2-1	Drywall/Joint Compound
BR-2-2	Drywall/Joint Compound
BR-2-3	Drywall/Joint Compound
BR-3-1	2' x 4' Ceiling Tiles
BR-3-2	2' x 4' Ceiling Tiles
BR-3-3	2' x 4' Ceiling Tiles
BR-4-1	Gray Duct Mastic
BR-4-2	Gray Duct Mastic
BR-4-3	Gray Duct Mastic
BR-5-1	White Caulk
BR-5-2	White Caulk
BR-5-3	White Caulk

Appendix E

Laboratory Analytical Result



EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

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

EMSL Order: 021802329

Customer ID: FMEC62

Customer PO: E5700.19

Project ID:

Attention: Glynn M. Ellen
F & ME Consultants
1825 Blanding Street
Columbia, SC 29201

Phone: (803) 254-4540

Fax: (803) 254-4542

Received Date: 03/30/2018 9:30 AM

Analysis Date: 03/31/2018 - 04/02/2018

Collected Date: 03/29/2018

Project: ACM Investigation - SOM Bld #1- Bathrooms Renovations

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
BR-1-1-Skim Coat <small>021802329-0001</small>	Plaster (Both Coates)	Gray/Beige Non-Fibrous Homogeneous		2% Quartz 10% Ca Carbonate 88% Non-fibrous (Other)	None Detected
BR-1-1-Rough Coat <small>021802329-0001A</small>	Plaster (Both Coates)	Gray/Tan/Beige Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
BR-1-2-Skim Coat <small>021802329-0002</small>	Plaster (Both Coates)	Gray/Beige Non-Fibrous Homogeneous		2% Quartz 10% Ca Carbonate 88% Non-fibrous (Other)	None Detected
BR-1-2-Rough Coat <small>021802329-0002A</small>	Plaster (Both Coates)	Gray/Tan/Beige Non-Fibrous Heterogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
BR-1-3-Skim Coat <small>021802329-0003</small>	Plaster (Both Coates)	Gray/Beige Non-Fibrous Homogeneous		2% Quartz 10% Ca Carbonate 88% Non-fibrous (Other)	None Detected
BR-1-3-Rough Coat <small>021802329-0003A</small>	Plaster (Both Coates)	Gray/Tan/Beige Non-Fibrous Homogeneous	1% Cellulose	30% Quartz 69% Non-fibrous (Other)	None Detected
BR-2-1-Drywall <small>021802329-0004</small>	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	10% Cellulose 1% Glass	89% Non-fibrous (Other)	None Detected
BR-2-1-Joint Compound <small>021802329-0004A</small>	Drywall/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
BR-2-2-Drywall <small>021802329-0005</small>	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	15% Cellulose 1% Glass	84% Non-fibrous (Other)	None Detected
BR-2-2-Joint Compound <small>021802329-0005A</small>	Drywall/Joint Compound	White Non-Fibrous Homogeneous	1% Cellulose	30% Ca Carbonate 69% Non-fibrous (Other)	None Detected
BR-2-3-Drywall <small>021802329-0006</small>	Drywall/Joint Compound	Brown/Gray Fibrous Heterogeneous	8% Cellulose 1% Glass	91% Non-fibrous (Other)	None Detected
BR-2-3-Joint Compound <small>021802329-0006A</small>	Drywall/Joint Compound	White Non-Fibrous Homogeneous	<1% Cellulose	30% Ca Carbonate 70% Non-fibrous (Other)	None Detected
BR-3-1 <small>021802329-0007</small>	2x4 Ceiling Tiles	Gray/Tan/White Fibrous Homogeneous	45% Cellulose 10% Min. Wool	40% Perlite 5% Non-fibrous (Other)	None Detected
BR-3-2 <small>021802329-0008</small>	2x4 Ceiling Tiles	Gray/Tan/White Fibrous Homogeneous	45% Cellulose 10% Min. Wool	40% Perlite 5% Non-fibrous (Other)	None Detected
BR-3-3 <small>021802329-0009</small>	2x4 Ceiling Tiles	Gray/Tan/White Fibrous Homogeneous	45% Cellulose 15% Min. Wool	30% Perlite 10% Non-fibrous (Other)	None Detected
BR-4-1 <small>021802329-0010</small>	Gray Duct Mastic	Gray Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected

Initial report from: 04/02/2018 13:15:02



EMSL Analytical, Inc.

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

EMSL Order: 021802329
Customer ID: FMEC62
Customer PO: E5700.19
Project ID:

Attention: Glynn M. Ellen
F & ME Consultants
1825 Blanding Street
Columbia, SC 29201

Phone: (803) 254-4540
Fax: (803) 254-4542
Received Date: 03/30/2018 9:30 AM
Analysis Date: 04/04/2018
Collected Date: 03/29/2018

Project: ACM Investigation - SOM Bid #1- Bathrooms Renovations

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
BR-4-3 021802329-0014	Gray Duct Mastic	Gray Non-Fibrous Homogeneous	100	None	No Asbestos Detected
BR-5-3 021802329-0015	White Caulk	White Non-Fibrous Homogeneous	100	None	No Asbestos Detected

Analyst(s)

Kristie Elliott (2)

Stephen Bennett, Laboratory Manager
or other approved signatory

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

Samples analyzed by EMSL Analytical, Inc. Kernersville, NC

Initial report from: 04/04/2018 09:49:27



EMSL Analytical, Inc.

706 Gralin Street Kernersville, NC 27284

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

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

EMSL Order: 021802329
Customer ID: FMEC62
Customer PO: E5700.19
Project ID:

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
BR-4-2 <small>021802329-0011</small>	Gray Duct Mastic	Gray Non-Fibrous Homogeneous	<1% Cellulose	100% Non-fibrous (Other)	None Detected
BR-5-1 <small>021802329-0012</small>	White Caulk	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected
BR-5-2 <small>021802329-0013</small>	White Caulk	White Non-Fibrous Homogeneous	<1% Cellulose	10% Ca Carbonate 90% Non-fibrous (Other)	None Detected

Analyst(s) _____

Nicole Shutts (7)
Scott Combs (12)

Stephen Bennett, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. 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. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request. Unless requested by the client, building materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Reporting limit is 1%

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

Initial report from: 04/02/2018 13:15:02

Appendix F

Chain of Custody Form



EMSL ANALYTICAL, INC.
LABORATORY • PRODUCTS • TRAINING

Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

2329

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: FME62	
Street: 3112 Devine Street		City: Columbia	State/Province: SC
Zip/Postal Code: 29205	Country: USA	Telephone #: 803-254-4540	Fax #: 803-254-4542
Report To (Name): Glynn Ellen		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
Email Address: gellen@fmecol.com, mmincey@fmecol.com		Purchase Order: E5700.19	
Project Name/Number: ACM Investigation - SOM Bid#1 - Bathrooms Renovations		EMSL Project ID (Internal Use Only):	
U.S. State Samples Taken: SC		CT Samples: <input checked="" type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	

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

Turnaround Time (TAT) Options* - Please Check

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

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

PCM - Air Check if samples are from NY

- NIOSH 7400
- w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)

PLM EPA 600/R-93/116 (<1%)

PLM EPA NOB (<1%)

Point Count

400 (<0.25%) 1000 (<0.1%)

Point Count w/Gravimetric

400 (<0.25%) 1000 (<0.1%)

NYS 198.1 (friable in NY)

NYS 198.6 NOB (non-friable-NY)

NYS 198.8 SOF-V

NIOSH 9002 (<1%)

TEM - Air 4-4.5hr TAT (AHERA only)

AHERA 40 CFR, Part 763

NIOSH 7402

EPA Level II

ISO 10312

TEM - Bulk

TEM EPA NOB

NYS NOB 198.4 (non-friable-NY)

Chatfield SOP

TEM Mass Analysis-EPA 600 sec. 2.5

TEM - Water: EPA 100.2

Fibers >10µm Waste Drinking

All Fiber Sizes Waste Drinking

TEM- Dust

Microvac - ASTM D 5755

Wipe - ASTM D6480

Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite

PLM EPA 600/R-93/116 with milling prep (<1%)

PLM EPA 600/R-93/116 with milling prep (<0.25%)

TEM EPA 600/R-93/116 with milling prep (<0.1%)

TEM Qualitative via Filtration Prep

TEM Qualitative via Drop Mount Prep

Cincinnati Method EPA 600/R-04/004 - PLM/TEM (BC only)

Other:

Check For Positive Stop - Clearly Identify Homogenous Group

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

Samplers Name: Mike Mincey

Samplers Signature: *Mike Mincey*

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
BR-1-1 to BR-1-3	Plaster (Both Coates)		
BR-2-1 to BR-2-3	Drywall/Joint Compound		
BR-3-1 to BR-3-3	2' x 4' Ceiling Tiles		
*BR-4-1 to BR-4-3	Gray Duct Mastic		
*BR-5-1 to BR-5-3	White Caulk		

Client Sample # (s): BR-1-1 - BR-5-3 Total # of Samples: 15

Relinquished (Client): *Mike Mincey* Date: 03/29/2018 Time: 17:00

Received (Lab): *MS* Date: 3/30/18 Time: 9:30

Comments/Special Instructions: TEM NOB 3rd sample for sample group marked with astericks.

② EMSL FX 7954 559 3522

Appendix G

Personnel Certifications

SCDHEC ISSUED

Asbestos ID Card

Glynn M Ellen



		Expiration Date:
SUPERAHERA	SA-00455	01/30/19
CONSULTPD	PD-00098	06/09/18
CONSULTMP	ASB-22641	01/29/19
AIRSAMPLER	AS-00079	01/30/19

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

SCDHEC ISSUED

Asbestos ID Card

Michael Mincey



SUPERAHERA	SA-01424	01/30/19
CONSULTMP	MP-00161	01/29/19
AIRSAMPLER	AS-00272	01/30/19

Expiration Date:

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

LEAD-BASED PAINT INVESTIGATION REPORT

**USC SCHOOL OF MEDICINE
BUILDING 1 - FIRST FLOOR
BATHROOM RENOVATIONS
6439 GARNERS FERRY ROAD
COLUMBIA, SOUTH CAROLINA**

PREPARED FOR:



**UNIVERSITY OF
SOUTH CAROLINA**

Mr. Pete Fisher
University of South Carolina
1300 Pickens Street
Columbia, South Carolina 29201

PREPARED BY:

F&ME Consultants
1825 Blanding Street
Columbia, South Carolina 29201

April 6, 2018

F&ME Project No.: E5700.200

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Appendix B – General Building Plan

Appendix C – XRF Data

Appendix D – Site Photographs of Lead Positive Items

Appendix E – Personnel Certification

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. (F&ME) has completed a Lead-Based Paint (LBP) Investigation of the first-floor bathrooms (Rooms B37 & B38) located in USC School of Medicine's Building 1. This LBP Investigation was performed on March 29, 2018 in anticipation of planned renovation activities of the existing bathrooms. Appendix A – Site Vicinity Map is provided to show the location of Building 1. Appendix B – General Building Plan, is provided to show the bathrooms lay-out and locations of XRF scans taken in the bathrooms.

Per an agreed upon scope of work, this LBP Investigation was conducted to identify, analyze, and assess the condition of any LBP or coated bathroom components which may be affected by the renovation activities. Additionally, F&ME agreed to make recommendations regarding proper handling and/or disposal methods if any LBP or coatings were identified. This investigation includes both a visual evaluation of the physical condition of painted materials as well as quantitative testing of random surfaces using a Thermo Scientific Niton X-Ray Fluorescence (XRF) Portable Analyzer. The XRF documents the concentration of lead, if any, in the overall paint or coating. Building components were scanned with a Niton XRF analyzer (Model #XLp 300A, Serial #18185) with a limit of detection (LOD) of 0.01 mg/cm².

LBP is regulated by multiple government agencies, and each requires different response actions when the concentration of lead exceeds specified thresholds. The Occupational Safety and Health Administration (OSHA) regulates worker exposure to lead dust, and as a result considers materials with any lead content to be a potential hazard. Additionally, South Carolina Department of Health and Environmental Control (SCDHEC) requires some waste materials to be disposed of at specific disposal facilities which are able to manage this waste. Appendix C – XRF Data, is provided to present the data in a user-friendly format. Items in red text contain lead in concentrations regulated by SCDHEC and these materials must be addressed upon disposal. Items in blue and red text contain lead in concentrations that must be considered a potential for worker exposure by OSHA.

The results from the XRF quantitative testing indicate that lead is present in paint and/or coatings on two (2) building components associated with the bathrooms. The two (2) components found to equal or exceed the threshold for lead (0.7 mg/cm²) were the tan painted metal bathroom stall partitions and the red painted metal window components located in the men's and women's bathrooms.

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

Sincerely,

F&ME CONSULTANTS



Jeffrey S. Leary

S.C. Lead-Based Paint Inspector

EPA Certification No. SC-I-18721-3 (Exp. 07/29/18)



Glynn M. Ellen

Environmental Department Manager

2. LEAD-BASED PAINT BACKGROUND INFORMATION

Housing and Urban Development (HUD) defines “LBP” as any coating that has a lead concentration of 1.0 milligrams of lead per square centimeter (1.0 mg/cm²) or greater, or if the lead concentration is greater than one half of a percent (> 0.5%) by weight. The Consumer Product Safety Commission (CPSC) currently considers paint to be lead-containing if the concentration of lead exceeds 90 ppm (0.009% by weight). In 1978, the CPSC banned the sale of LBP to consumers, and banned its application in areas where consumers have direct access to painted surfaces. Both the CPSC and HUD definitions of lead-containing paint are aimed at protecting the general population from exposure to lead in the residential setting.

In contrast, the mission of OSHA with respect to lead-containing paint is to protect workers during construction activities that may generate elevated airborne lead concentrations. OSHA states that construction work (including renovation, maintenance, and demolition) carried-out on structures coated with paint having lead concentrations lower than the HUD or CPSC can still result in airborne lead concentrations in excess of regulatory limits. For this reason, OSHA has not defined lead-containing paint, but states that paint having any measurable level of lead (≥ 0.01 mg/cm²) may pose a substantial exposure hazard during construction work, depending upon the work performed. Therefore, in these situations, OSHA guidelines and safety procedures should be followed. By OSHA standards and regulations, the employer shall ensure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 ug/m³) averaged over an 8-hour period.

Additionally, SCDHEC requires the use of specific waste disposal sites if materials contain lead concentrations greater than or equal to (\geq) 0.7 mg/cm². It is imperative that these regulations be considered if any present or future renovations and/or demolition activities will impact LBP-containing building materials or equipment. Due to the anticipated impact on the building’s components from the planned renovation activities, SCDHEC lead disposal requirements were used as the threshold for this Investigation.

3. INTRODUCTION

It is F&ME’s understanding that a planned renovation will include a complete removal of all interior finishes to the existing first floor bathrooms (men’s and women’s). Therefore, the scope of this LBP Investigation was to identify, assess and sample materials suspected of containing asbestos within the interior of both bathrooms. The field investigation was performed on March 29th, 2018. This LBP Investigation was conducted to identify, analyze, and assess the condition of any LBP or coated interior bathroom components that may be affected by the renovation activities. Where LBP or coatings have been identified, recommendations regarding proper handling and/or disposal methods are provided.

The first floor men's and women's bathrooms are located in hallway (H-103) of Building 1 on the campus of USC's School of Medicine. The women's bathroom (276 SF) and the men's bathroom (261 SF) are constructed with masonry block, brick, concrete and steel structural columns, wood and steel framing. The original construction date of the building dates back to the early 1930's. Since then, Building 1 has undergone multiple renovations over the years with the most recent renovation taking place in the early 1980's. The interior finishes include plaster and drywall walls, ceramic wall and floor tile, stall partitions, a suspended ceiling system with multiple sinks and toilets.



Photo 1. University of South Carolina, School of Medicine Building 1, First Floor Bathroom.

See Appendix A – Site Vicinity Map, for the location of the structure. See Appendix B –General Building Plan, for a layout of the bathrooms.

4. INVESTIGATION RESULTS

F&ME's LBP Investigation sampling protocol consisted of randomly selecting interior building components and scanning these components with a Thermo Scientific Niton X-Ray Fluorescence (XRF) Portable Analyzer (Model XLp300A, Serial #18185, Isotope 1: Cd109, 40mCi, source date 09/01/2015). The components scanned with the XRF include the following: walls, ceilings, ceiling grid, doors and door components, windows and window components, bathroom stall partitions, flooring, baseboards, porcelain sinks, toilets, and urinals, piping, etc.

The results from the XRF quantitative testing indicate that lead is present in paint and/or coatings on two (2) building components associated with the bathrooms. The two (2) components found to equal or exceed the threshold for lead (0.7 mg/cm^2) were the metal tan painted metal bathroom stall partitions and the red painted metal windows components located in the men's and women's bathrooms. It appears that the windows have probably had an older paint removed and then repainted with a new red paint with traces of lead left behind from the old paint, because some of the test on the red painted window components tested negative for lead.

For more information regarding the specific descriptions and locations of the items that were scanned, refer to the Appendix C – XRF Data. Also, Appendix D – Site Photographs, shows the materials that were found to be coated or painted with LBP greater than or equal to (\geq) 0.7 mg/cm^2 . Appendix E - Personnel Certification, is included to show F&ME qualifications with regards to LBP Investigations.

5. RECOMMENDATIONS

The results, conclusions and recommendations from 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 USC and shall not be disseminated in whole or part to other parties without prior consent from USC or F&ME Consultants, Inc. No other environmental issues were addressed as part of this report.

LBP was identified on two (2) bathroom components in concentrations above the SCDHEC limits of 0.7 mg/cm². The two (2) components were the tan painted metal bathroom stall partitions and the red painted metal windows located in the men's and women's bathrooms. One (1) component tested positive for lead at levels that would be a concern under OSHA regulations. The one (1) component was the red painted fire sprinkler piping. Therefore, OSHA regulations and procedures should be followed when handling these components.

It is important to ensure that the debris generated from the renovation activities is handled and disposed of appropriately. The proper handling and disposal procedures depend on the type of substrate (e.g., metal, wood, masonry block, etc.). In order to reduce and/or eliminate the generation of lead-containing dust, and residue, it is recommended that cutting, sanding and grinding be kept to a minimum, and to the extent practicable, the substrate materials should be removed intact. Metal components painted with and/or containing lead, such as the tan painted metal bathroom stall partitions and the red painted metal windows may be recycled, if they are taken to a recycling facility that accepts lead painted and/or lead-containing material.

Components found to contain lead should be handled appropriately. It is recommended that work tasks which require grinding, sanding, cutting torch, or other disturbance of the LBP surfaces identified herein be performed in accordance with federal regulations pertaining to worker protection from exposure to LBP. When lead containing items are disturbed or begin to decay they become a concern with regard to human health and the environment. The typical routes of exposure to lead are through the inhalation or ingestion of lead-contaminated materials. Minimal risk of exposure exists where the lead-containing paint and coating are intact (e.g., has not been aerosolized, free of chipping or flaking, etc.).

As stated previously, OSHA regulates any measurable level of lead (≥ 0.01 mg/cm²), as it may pose a substantial exposure hazard to workers. Therefore, in these situations, OSHA regulations and safety procedures should be followed. These regulations also list the proper personal protective equipment to be used by the workers disturbing the LBP items and the requirements for personal air monitoring. OSHA's exposure action level (AL) for lead, regardless of respirator use, is an airborne concentration of 30 μ g/cm³, averaged over an eight-hour period. The action level (AL) is the level at which an employer must begin specific compliance activities as outlined in OSHA's lead standards. By OSHA standards and regulations, the employer shall ensure that no employee is exposed to lead at concentrations greater than fifty micrograms per cubic meter of air (50 μ g/m³) averaged over an 8-hour period which is the permissible exposure level (PEL).

SCDHEC regulates the proper disposal of LBP and associated debris. SCDHEC defines two types of LBP debris. The first is LBP *waste*, which is defined as material such as wood, brick and metal that is painted with LBP. The other is LBP *residue* which is defined as residue that is generated from the removal (e.g., scraped, chipped, sandblasted, or chemical) of LBP from a structure. LBP *waste* that comes from a commercial or residential facility may be disposed of in either a class 2 or 3 landfill, while LBP *residue* from a commercial facility must have a toxicity characteristic leaching procedure (TCLP) analysis to determine the lead content. TCLP analysis is used to determine whether or not a waste is a characteristic hazardous waste due to leachability under the South Carolina Hazardous Waste Management Regulations. LBP *residue* with a TCLP analysis result greater than or equal to five milligrams per liter (≥ 5 mg/l) lead must be disposed of in a Subtitle C landfill (Hazardous Waste). However, LBP *residue* from a commercial facility with a TCLP analysis result less than five milligrams per liter (< 5 mg/l) lead is required to be disposed of in a Class 3 landfill.

Should any hidden and/or inaccessible components suspected to have LBP be encountered during renovation activities, the contractor performing the work is advised to stop work, follow proper procedures and precautions relating to LBP, and contact F&ME Consultants at (803) 254-4540 for an immediate response action.

APPENDICES

Appendix A – Site Vicinity Map

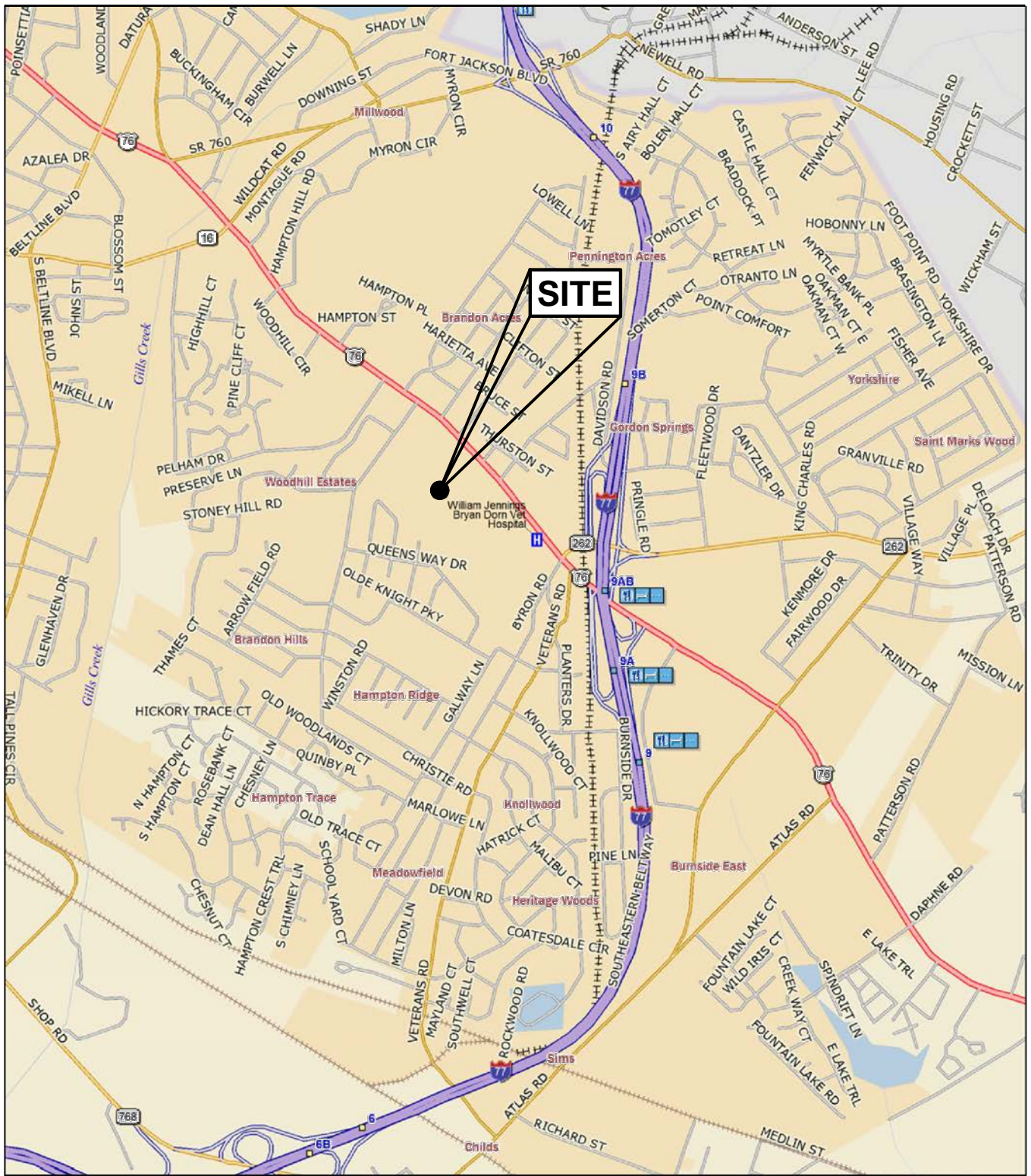
Appendix B – General Building Plans

Appendix C – XRF Data

Appendix D – Site Photographs of Lead Positive Items

Appendix E – Personnel Certification

Appendix A
Site Vicinity Map

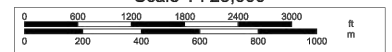


Data use subject to license.

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www.delorme.com

Scale 1 : 25,000



1" = 2,083.3 ft Data Zoom 13-0

FIGURE
NUMBER:

1

F&ME CONSULTANTS
PROJECT NUMBER:

E5700.2000

**Lead-Based Paint Investigation
USC School of Medicine Building 1 - 1st Floor Bathroom
Renovation**

6439 Garners Ferry Rd., Columbia, SC

Appendix A - Site Vicinity Map

Prepared for:

Facilities Planning and Construction
743 Greene Street
Columbia, SC 29208

**F&ME
CONSULTANTS**

3112 Devine Street
Columbia, SC 29205

ORIGINAL:
April 4, 2018

REVISIONS:

1

2

3

SCALE
As Shown

DRWN. BY: CTC

CHKD. BY: JSL

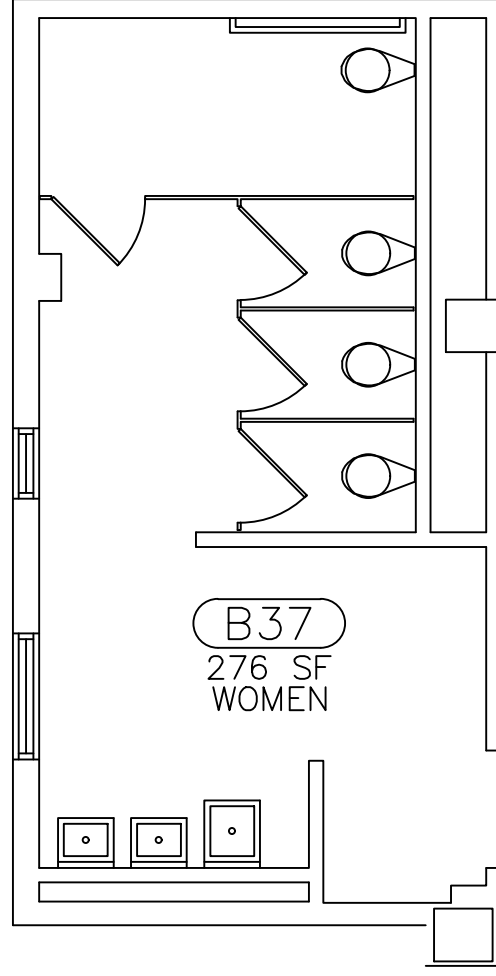
APPR. BY: GME

NOTES:

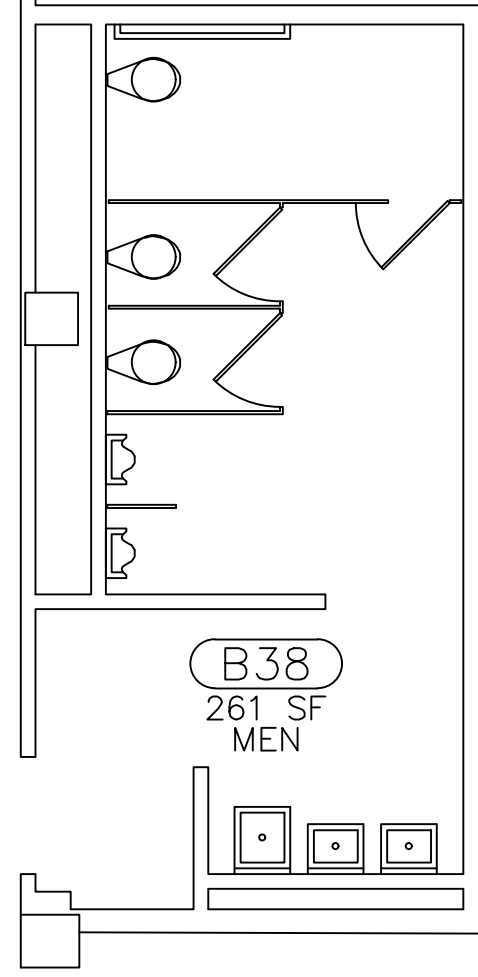
Appendix B

General Building Plan

D



C



B

A

F&ME CONSULTANTS
PROJECT NUMBER:

E5700.200

FIGURE NUMBER:

2

Lead-Based Paint Investigation
USC School of Medicine, Bld. 1 - Bathrooms Renovation
6439 Garners Ferry Rd., Columbia, SC

Appendix B - General Building Plan

Prepared for:
Facilities Planning and Construction
743 Greene Street
Columbia, SC 29208

ORIGINAL: April 4, 2018

REVISIONS:

1

2

3

NOTES:

SCALE

3/16" = 1'

DRAWN BY: MSN

CHKD. BY: JSL

APPR. BY: GME

F&ME CONSULTANTS
GEOTECHNICAL - ENVIRONMENTAL - MATERIALS
3112 Devine Street
COLUMBIA, SC 29205

Appendix C

XRF Data

Appendix C – Summary of XRF Data

Date Scanned: 03/29/18

Scan No.	Component	Substrate	Side	Condition	Color	Sample Location	Pbc (mg/cm ²)
1			Shutter Calibrate				NA
2			Calibrate				0.6
3			Calibrate				1.1
4			Calibrate				1
5			Calibrate				0.6
6	Wall	Plaster	C	Intact	Tan	B38	< LOD
7	Wall	Drywall	Center	Intact	Tan	B38	< LOD
8	Wall	Ceramic Tile	C	Intact	Yellow	B38	< LOD
9	Baseboard	Ceramic Tile	C	Intact	Yellow	B38	< LOD
10	Door Casing	Metal	D	Intact	Red	B38	< LOD
11	Door Casing	Metal	D	Intact	Brown	B38	< LOD
12	Door	Wood	D	Intact	Varnish	B38	< LOD
13	Ceiling grid	Metal	B	Intact	Black	B38	< LOD
14	Floor	Ceramic Tile	B	Intact	Yellow	B38	< LOD
15	Sink	Porcelain	C	Intact	White	B38	< LOD
16	Sink- handicap	Porcelain	C	Intact	White	B38	< LOD
17	Urinal	Porcelain	D	Intact	White	B38	< LOD
18	Toilet	Porcelain	D	Intact	White	B38	< LOD
19	Wall	Plaster	A	Intact	Tan	B38	< LOD
20	Wall	Plaster	B	Intact	Tan	B38	< LOD
21	Stall partition	Metal	Center	Intact	Tan	B38	1.2
22	Stall partition	Metal	Center	Intact	Tan	B38	1.0
23	Stall partition	Metal	Center	Intact	Tan	B38	1.9
24	Stall partition	Metal	Center	Intact	Tan	B38	0.9
25	Stall partition	Metal	Center	Intact	Tan	B38	0.8
26	Win. Casing	Metal	B	Intact	Red	B38	0.18
27	Win. Casing	Metal	B	Intact	Red	B38	< LOD
28	Win. muntin	Metal	B	Intact	Red	B38	< LOD
29	Win. Sill	Brick	B	Intact	Yellow	B38	< LOD
30	Sprinkler pipe	Metal	C	Intact	Red	B38	0.6
31	Win. Casing	Metal	B	Intact	Red	B38	< LOD
32	Win. Casing	Metal	B	Intact	Red	B38	< LOD
33	Win. muntin	Metal	B	Intact	Red	B38	< LOD
34	Win. muntin	Metal	B	Intact	Red	B38	< LOD
35	Win. Sash	Metal	B	Intact	Red	B38	0.9
36	Wall	Drywall	A	Intact	Tan	B37	< LOD
37	Wall	Plaster	D	Intact	Tan	B37	< LOD
38	Wall	Plaster	C	Intact	Tan	B37	< LOD
39	Wall	Drywall	B	Intact	Tan	B37	< LOD
40	Wall	Concrete	B	Intact	Tan	B37	< LOD

Blue text indicates any concentrations of LBP which OSHA considers a potential exposure risk when removed.

Red text indicates concentrations of LBP that have specific disposal requirements regulated by SCDHEC.

Appendix C – Summary of XRF Data

Date Scanned: 03/29/18

Scan No.	Component	Substrate	Side	Condition	Color	Sample Location	Pbc (mg/cm ²)
41	Baseboard	Ceramic Tile	B	Intact	Tan	B37	< LOD
42	Floor	Ceramic Tile	B	Intact	Tan	B37	< LOD
43	Win. Casing	Metal	D	Intact	Red	B37	1.8
44	Win. Casing	Metal	D	Intact	Red	B37	< LOD
45	Win. muntin	Metal	D	Intact	Red	B37	1.4
46	Sink	Porcelain	C	Intact	White	B37	< LOD
47	Sink	Porcelain	C	Intact	White	B37	< LOD
48	Toilet	Porcelain	B	Intact	White	B37	< LOD
49	Toilet	Porcelain	B	Intact	White	B37	< LOD
50	Floor	Ceramic Tile	B	Intact	Tan	B37	< LOD
51	Shelf	Wood	Center	Intact	Red	B37	< LOD
52	Shelf	Wood	Center	Intact	Red	B37	< LOD
53	Stall partition	Metal	Center	Intact	Tan	B37	2.0
54			Calibrate				0.6
55			Calibrate				1
56			Calibrate				0.6
57			Calibrate				1
58			Shutter Calibrate				NA

Blue text indicates any concentrations of LBP which OSHA considers a potential exposure risk when removed.

Red text indicates concentrations of LBP that have specific disposal requirements regulated by SCDHEC.

Appendix D

Site Photographs of Lead Positive Items

Photographs 1 & 2



Photographs of lead positive metal bathroom stall partitions in the men's and women's bathrooms on the first floor (Rooms B37 & B38)

Photographs 3 & 4



Photographs of lead positive windows in the men's and women's bathrooms on the first floor (Rooms B37 & B38)



Appendix E

Personnel Certification

United States Environmental Protection Agency

This is to certify that

Jeffrey Steve Leary



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

South Carolina

This certification is valid from the date of issuance and expires July 29, 2018

SC-I-18721-3

Certification #

April 24, 2015

Issued On



Adrienne Priselac, Manager, Toxics Office

Land Division