

**Presented to:**  
**Mr. Art Goguen, MEPM**  
**Director of EHS**



14 Inverness Drive East, Suite E-100  
Englewood, Colorado 80112

## **Asbestos Inspection Report- Supplemental Fire Proofing Testing**

**Denver VA Hospital, Building 21**  
**1055 Clermont Street**  
**Denver, Colorado 80220**

August 26, 2015

**EQM** Environmental  
Quality  
Management

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## **1.0 INTRODUCTION**

Higgins and Associates, LLC contracted Environmental Quality Management, LLC (EQM) to collect additional fire proofing samples to further delineate the fire proofing in Building 21 at the Denver VA, located at 1055 Clermont Street, Denver, Colorado 80220 (subject property). This asbestos inspection was conducted on August 19, 2015.

Colorado Regulation #8 requires that suspect Asbestos Containing Building Materials (ACBM) be properly sampled and analyzed prior to any renovation or demolition activities. The purpose of this sampling was to collect the appropriate amount of samples of the mint green and tan fire proofing materials.

## **2.0 ASBESTOS INSPECTION**

This asbestos inspection was conducted according to the United States Environmental Protection Agency (EPA) procedures published in 40 Code of Federal Regulations (CFR) Part 763, Subpart E – Asbestos-containing Materials in Schools and Colorado Regulation 8. These inspection protocols specify requirements for the inspector (Section 763.85), laboratory (Section 763.87), and number of samples collected during an inspection (Section 763.86). This inspection was conducted by Colorado State Certified Asbestos Building Inspectors, Gabe Touma.

Suspect ACM includes nearly all building materials except glass, metal, and wood. Bulk samples of suspect ACM were collected in general conformance with AHERA protocols as outlined in Colorado Regulation 8. The samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker.

## **2.2 ASBESTOS CONTAINING MATERIALS**

ACM contains asbestos greater than 1 percent, (> 1% asbestos) as confirmed by an accredited laboratory. ACM is categorized as Non-friable or Friable asbestos. Non-friable asbestos is any material that cannot be crumbled, pulverized or reduced to a powder by hand pressure when dry. Friable asbestos can be crumbled, pulverized, or reduced to a powder by hand pressure when dry.

The EPA and the Occupational Safety and Health Administration (OSHA) maintain comprehensive lists of suspect ACM frequently found during inspections. Appendix A contains a list of homogeneous areas found during this inspection. Appendix B contains summary tables of the samples taken with results. Appendix C contains the analytical results from the laboratory.

## **2.3 SUSPECT ASBESTOS CONTAINING MATERIALS**

Suspect ACMs are building materials historically known to contain asbestos and therefore suspected to contain asbestos. On August 19, 2015, five (5) samples were submitted under chain-of-custody procedures to EMSL Analytical, Inc. of Denver, Colorado, for analysis by polarized light microscopy with dispersion staining techniques per EPA methodology (40 CFR 763, Subpart F). Microscopic visual estimation was used in obtaining the percentage of asbestos in bulk samples. EMSL is accredited under the National Voluntary Laboratory Accreditation Program NVLAP. Appendix C contains these analytical results.

## **2.4 LABORATORY RESULTS**

Based on the PLM laboratory results, asbestos was not detected in the mint green or tan fire proofing material.

## **2.5 RECOMMENDATIONS**

No further action is recommended with respect to the mint green and tan fire proofing.

## **2.6 GENERAL COMMENTS**

This asbestos inspection was conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our inspection. The information contained in this report is relevant to the date on which this survey was performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by the Client for specific application to the project as discussed. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. EQM does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

### 3.0 CONCLUSION

EQM has performed a limited asbestos inspection at the subject property. Specifically, the inspection involved additional sampling of the mint green and tan fire proofing materials in building 21. Based on the PLM laboratory results, asbestos was not detected in the mint green or tan fire proofing material. No further action is recommended with respect to the mint green and tan fire proofing.

Respectfully Submitted,



Gabe Touma, CHMM No. 14285  
Certified Building Inspector #16860  
Certified Air Monitoring Specialist #16860

*Appendix A*  
*Homogenous Areas Table*

Homogenous Areas Table		
Building 21, Denver VA, 1055 Clermont Street, Denver, Colorado 80220		
Number	Description/Category/Friability/condition	Location
#1	Mint green fire proofing, fibrous <ul style="list-style-type: none"> <li>• Surfacing, friable, good condition</li> </ul>	Rooms 102, 205, , 210, 201 and 2 <sup>nd</sup> floor hallway
#2	Tan/brownish fire proofing, fibrous <ul style="list-style-type: none"> <li>• Surfacing, friable, good condition</li> </ul>	Rooms 202, 311, 304 and 3 <sup>rd</sup> floor hallway

PLEASE NOTE THESE MATERIALS MAY BE IN ANOTHER AREAS, WHICH WERE NOT ACCESSED.



*Appendix B*  
*Summary of Asbestos Samples and Results*

SUMMARY OF ASBESTOS SAMPLES AND RESULTS			
Building 21, Denver VA, 1055 Clermont Street, Denver, Colorado 80220			
Sample ID	Description	Locations	Result
FP2-6	Mint green fire proofing	Room 102, I-beam, northwest corner chase, 10' up	ND
FP2-7		Room 201, north wall, 6' east of west wall, 10' up	ND
FP3-5	Tan/brownish fire proofing	Room 202, south wall, 14' east of west wall, 10' up	ND
FP3-6		Room 304, north wall, 2' east of northwest chase	ND
FP3-7		3 <sup>rd</sup> floor hallway, west wall, next to southwest chase, 10.5' high	ND

**ND=NON-DETECT**

*Appendix C*  
*Laboratory Report and Chain-of-Custody Record*

**EMSL Analytical, Inc.**

1010 Yuma Street, Denver, CO 80204

Phone/Fax: (303) 740-5700 / (303) 741-1400

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

EMSL Order: 221505184

CustomerID: HIGG78

CustomerPO:

ProjectID:

Attn: **Art Goguen**  
**Higgins and Associates, LLC**  
**14 Inverness Drive E**  
**Building E-100**  
**Englewood, CO 80112**

Phone: (303) 708-9846  
Fax: (303) 708-9848  
Received: 08/19/15 2:55 PM  
Analysis Date: 8/22/2015  
Collected:

Project: **B21-FP**

## 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
B21-FP2-6 221505184-0001		Blue Fibrous Homogeneous	40% Cellulose	60% Non-fibrous (other)	None Detected
B21-FP2-7 221505184-0002		Blue Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (other)	None Detected
B21-FP3-05 221505184-0003		Brown Fibrous Homogeneous	20% Cellulose	5% Mica 75% Non-fibrous (other)	None Detected
B21-FP3-06 221505184-0004		Brown Fibrous Homogeneous	35% Cellulose	5% Mica 60% Non-fibrous (other)	None Detected
B21-FP3-07 221505184-0005		Brown Fibrous Homogeneous	30% Cellulose	5% Mica 65% Non-fibrous (other)	None Detected

Analyst(s)

William Nguyen (5)

Barbara Shepherd, 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. Denver, CO NVLAP Lab Code 200828-0

Initial report from 08/22/2015 13:35:09

EMSL ANALYTICAL, INC.  
LABORATORY • PRODUCTS • TRAINING

## Asbestos Chain of Custody

EMSL Order Number (Lab Use Only):

221505184

EMSL ANALYTICAL, INC

1010 YUMA ST.

DENVER, CO 80204

PHONE (303)-740-5700

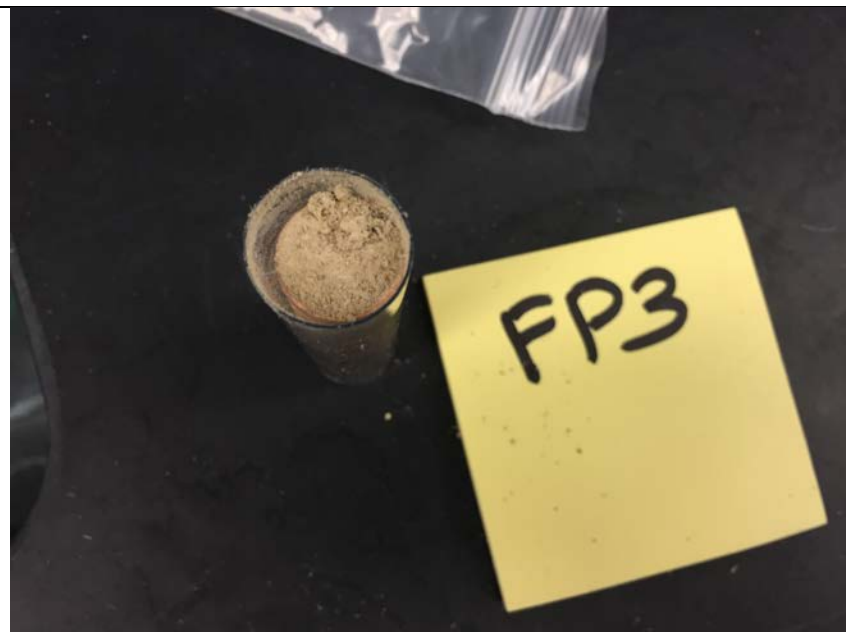
FAX (303)-741-1400

Company: <u>Hygiene Associates</u>		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note instructions in Comments**	
Street: <u>14 Summers Drive East</u>		Third Party Billing requires written authorization from third party	
City: <u>Englewood</u>	State/Province: <u>CO</u>	Zip/Postal Code:	Country:
Report To (Name): <u>Gabe Toulou Art Gourea</u>		Telephone #:	
Email Address: <u>Gabe@EPM-40.Us</u>		Fax #:	Purchase Order:
Project Name/Number: <u>B21-FP</u>		Please Provide Results: <input type="checkbox"/> Fax <input checked="" type="checkbox"/> Email	
U.S. State Samples Taken: <u>Colorado</u>		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input checked="" type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*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			
<b>PCM - Air</b> <input type="checkbox"/> Check if samples are from NY <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA <b>PLM - Bulk (reporting limit)</b> <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)		<b>TEM - Air</b> <input type="checkbox"/> 4-4.5hr TAT (AHERA only) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 <b>TEM - Bulk</b> <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 <b>TEM - Water:</b> EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	
<b>TEM - Dust</b> <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) <b>Soil/Rock/Vermiculite</b> <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> TEM Qual. via Filtration Technique <input type="checkbox"/> TEM Qual. via Drop-Mount Technique <b>Other:</b> <input type="checkbox"/>			
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Filter Pore Size (Air Samples): <input type="checkbox"/> 0.8µm <input type="checkbox"/> 0.45µm	
Samplers Name:		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
B21-FP2-6			
B21-FP2-7			
B21-FP3-05			
B21-FP3-06			
B21-FP3-07			
Client Sample # (s):		Total # of Samples:	
Relinquished (Client): <u>[Signature]</u>		Date: <u>8/19/15</u> Time: <u>2:55 pm</u>	
Received (Lab): <u>RD</u>		Date: <u>8/19/15</u> Time: <u>2:55 pm</u>	
Comments/Special Instructions: <u>W1</u>			

*Appendix D*  
*Photographic Documentation*



**FP2- Mint Green Fire Proofing Material- ND**



**FP3- Tan/Brownish Fire Proofing Material-ND**