

**TARGETED SURVEY
FOR ASBESTOS BUILDING 7
SCI 1E & 1W
VA MEDICAL CENTER
MEMPHIS, TN**

Prepared for:

TOLAND MIZELL MOLNAR
590 MEANS STREET NW, SUITE 200
ATLANTA, GEORGIA 30318

Report Date:

June 25, 2016

Prepared by:

MICHAEL F. DURBIN, CIH
DURBIN ENVIRONMENTAL CONSULTANTS, INC.
2201 POTOMAC PLACE
LAWRENCEVILLE, GEORGIA 30043
(770) 601-7791

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1. INTRODUCTION

Durbin Environmental Consultants, Inc. (DEC) was retained by Toland Mizell Molnar, to conduct a targeted hazardous material assessment for suspect asbestos containing materials at the VA Medical Center, Memphis, TN, in support of the Renovation of Building 7, 1st Floor, SCI 1E & 1W Project. The survey area was limited to the interior areas above the suspended ceiling system and flooring materials were specifically excluded. Michael F. Durbin, CIH of Durbin Environmental Consultants, Inc., conducted the targeted asbestos survey on June 20, 2016. Mr. Durbin is currently accredited as an asbestos inspector (A-I-96880-45131) and a project designer (A-PD-96880-45132) by the State of Tennessee Department of Environment and Conservation Division of Solid Waste Management Toxic Substances Program.

Bulk sample analysis for suspect asbestos containing materials was performed by Analytical Environmental Services, Inc., 3080 Presidential Drive, Atlanta, Georgia 30340. Analytical Environmental Services Inc. is accredited for asbestos fiber analysis through participation in the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP) and is assigned NVLAP Lab Code 102082-0. Analytical Environmental Services Inc. utilized the analytical method: EPA/600/R-93/116: "Method for the Determination of Asbestos in Bulk Building Materials" (polarized light microscopy in conjunction with dispersion staining).

2. DISCUSSION AND RESULTS

a. Asbestos – SCI 1E & 1W

The asbestos survey was conducted in substantial accordance with the sampling protocol established in the Environmental Protection Agency's Asbestos Hazard Emergency Response Act (AHERA 40 CFR, Part 763) for the materials included in this specific survey. The following provides general information and summarizes the potential impact of asbestos containing material during any scheduled renovation or demolition project in the areas specifically included in this survey.

Bulk samples were collected from the following suspect asbestos containing materials during this survey for the VA Memphis, Renovation of Building 7, 1st Floor, SCI 1E & 1W Project:

1. White 2' X 2' Ceiling Tile, Small Gouges and Pinholes (HM #1)
2. Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass (HM #2)
3. Drywall and Drywall Joint Compound (HM #3)
4. Paper Wrapped Pipe Insulation, Fiberglass Confirmation (HM #4)
5. Brown Seam Sealer on Metal Ducts (HM #5) – From Previous VA Survey Report

The following collected bulk sample material **contained asbestos** by Polarized Light Microscopy (PLM) (reference Appendix A for the Asbestos Bulk Sampling Summary followed by Representative Photographs of Suspect Asbestos Containing Materials).

1. Brown Seam Sealer on Metal Ducts (HM #5) – From Previous VA Survey Report

3. METHODOLOGY

Asbestos Sampling Protocol

The inspector sampled all suspect ACM in accessible areas. In order for a group of homogeneous materials to be considered as non asbestos containing, all samples from that specific homogeneous material must be analyzed and determined to be non asbestos containing or less than or equal to 1% asbestos.

Representative, randomly selected samples were collected from each homogeneous area of suspect asbestos-containing material. For purposes of this report, the homogeneous area is physically defined as all material with the same visual appearance, texture and hardness.

The minimum number of samples collected for each homogeneous area (or material) is as follows:

1. Spray-applied or Trowel-applied Material (Not Applicable for this Survey)

- a. Less than or equal to 1000 square feet (S.F.) = 3 samples
- b. Greater than 1000 S.F. and less than or equal to 5000 S.F. = 5 samples.
- c. Greater than 5000 S. F. = 7 samples

2. Pipe and Duct Insulation

Three samples per homogeneous area of insulation were taken unless it was a confirmation sample.

3. Elbows, Valves, Fittings and Connection Mud (Not Applicable for this Survey)

Three representative samples were taken from each representative type of insulated elbow, valve, fitting and connecting mud unless it was a confirmation sample.

4. Boiler, Tanks and Furnaces (Not Applicable for this Survey)

A minimum of 3 samples per unit was collected.

5. Patchwork (Not Applicable for this Survey)

Patchwork is defined as a patch or repair to existing material based on the following quantities:

- a. Surfacing material patches are limited to a maximum of 6 S. F.
- b. Pipe and duct insulation patches are limited to a maximum of 6 L. F. or 6 S. F.

- c. Boiler, tanks and furnace patches are limited to 6 S.F. maximum.

If the patchwork exceeded the limits prescribed above, the sampling protocol resorted back to the homogeneous area descriptions in items 1-4. If a material qualifies as patchwork, a single sample was collected per patch.

6. Ceiling or Acoustical Tile

- a. Minimum of 3 Samples

7. Miscellaneous Friable Material (Not Applicable for this Survey)

- a. 3 Samples

8. Non-friable Material

- a. Minimum of 3 samples

4. **OBSERVATIONS/CONCLUSIONS**

Asbestos – SCI 1E & 1W

The following collected bulk sample material **contained asbestos** by Polarized Light Microscopy (PLM) (reference Appendix A for the Asbestos Bulk Sampling Summary followed by Representative Photographs of Suspect Asbestos Containing Materials).

- 1. Brown Seam Sealer on Metal Ducts (HM #5) – From Previous VA Survey Report

The Brown Seam Sealer on Metal Ducts (HM #5) is characterized by the Occupational Safety and Health Administration (OSHA) Asbestos Standard 29 CFR 1926.1101 as a Class II removal activity. The Environmental Protection Agency (EPA) Part 61 Subpart M – National Emission Standard for Asbestos characterizes the Brown Seam Sealer on Metal Ducts (HM #5) as a Category II non-friable asbestos-containing material (ACM).

5. **RECOMMENDATIONS**

- A. The asbestos containing material survey report should be maintained at the job site during performance of the construction activities.
- B. Communication of this asbestos survey report results should be presented in accordance with the OSHA 29 CFR 1926.1101 Asbestos Standard to all personnel who may enter or perform work in areas affected by the Building 7, 1st Floor, SCI 1E & 1W Project at the VAMC in Memphis, TN.

- C. Complete Notification of Demolition and/or Asbestos Renovation (Form CN-1055) to: State of Tennessee, Department of Environment and Conservation, Division of Air Pollution Control, William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 15th Floor, Nashville, Tennessee 37243-1531 and Courtesy Notification for Asbestos Removal to Memphis Shelby County Health Department, Pollution Control Section, 814 Jefferson Avenue, Memphis, Tennessee 38105. Notification shall be provided via government Asbestos Notification Forms.
- D. The approximate construction date of Building 7 was mid 1980's so PCB ballasts or articles are unlikely. However, if disturbed as part of this project, remove and dispose of all PCB ballasts, capacitors, PCB articles in accordance with 40 CFR Part 761 Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, and other applicable Federal, State and Local Regulations.
- E. If disturbed as part of this project, remove and dispose of all batteries, mercury-containing equipment and bulbs in accordance with 40 CFR Part 273 Standards for Universal Waste Management and State of Tennessee Solid Waste Management and Hazardous Waste Management Rules/Regulations.
- F. Comply with 40 CFR 1910.1200 Hazard Communication (29 CFR 1926.59)
- G. If disturbed as part of this project, refrigerants shall be disposed on in accordance with Section 608 of the Clean Air Act (EPA Refrigerant and Recycling Rule and 40 CFR Part 82 Protection of Stratospheric Ozone) in addition to the State of Tennessee requirements.

6. REFERENCES

- 1. Guidance for Controlling Asbestos-Containing Materials in Buildings” (Purple Book). EPA 560/5-85-024. Office of Pesticides and Toxic Substances Washington, DC 20460
- 2. 40 CFR, Part 763, Asbestos Hazard Emergency Response Act
- 3. 40 CFR, Part 763, Asbestos School Hazard Abatement Reauthorization Act
- 4. 40 CFR, Part 61, Subpart M Asbestos
- 5. 29 CFR Part 1926.1101 Asbestos
- 6. 40 CFR Part 260 General Hazardous Waste Management
- 7. 40 CFR Part 261 Identification and Listing of Hazardous Waste
- 8. 40 CFR Part 262 Standards Applicable to Generators of Hazardous Waste
- 9. 40 CFR Part 263 Standards Applicable to Transporters of Hazardous Waste

10. 40 CFR Part 268 Land Disposal Restrictions
11. 40 CFR Part 761 Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
12. 40 CFR Part 273 Standards for Universal Waste Management
13. Section 608 of the Clean Air Act (EPA Refrigerant and Recycling Rule and 40 CFR Part 82 Protection of Stratospheric Ozone) in addition to the State of Tennessee requirements

If you have any questions or comments regarding this report, please do not hesitate to call.

Sincerely,
Durbin Environmental Consultants, Inc.

Michael F. Durbin, CIH

Michael F. Durbin, CIH (EPA-Accredited Asbestos Inspector/Management Planner, Certificate Number 14982, Expiration Date: May 23, 2017); State of Tennessee Asbestos Inspector Certification (A-I-96880-45131) and Project Designer Certification (A-PD-96880-45132)
President

APPENDIX A

Asbestos Bulk Sampling Summary Followed by Representative Photographs of Suspect Asbestos Containing Materials

Sample Number	Description	Asbestos Present	Friable	Non-Asbestos Material Present	Sample Location	HM
7-CT1-01	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Vestibule to Outside Game Courts, Near Room 1C151	1
7-CT1-02	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B136 & 1B138	
7-CT1-03	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Stair Number 2, Next to Room 1B110	
7-CT1-04	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B113 & 1B125	
7-CT1-05	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C104	
7-CT1-06	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	
7-CT1-07	White 2' X 2' Ceiling Tile, Small Gouges and Pinholes	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C139	

Sample Number	Description	Asbestos Present	Friable	Non-Asbestos Material Present	Sample Location	HM
7-DM1-01	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C151	2
7-DM1-02	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B136 & 1B138	
7-DM1-03	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Stair Number 2, Next to Room 1B110	
7-DM1-04	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B113 & 1B125	
7-DM1-05	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C104	
7-DM1-06	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	
7-DM1-07	Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C139	
7-DWJC-01	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Vestibule to Outside Game Courts, Near Room 1C151	3
7-DWJC-02	Drywall and Drywall Joint Compound les	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B136 & 1B138	
7-DWJC-03	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Stair Number 2, Next to Room 1B110	

Sample Number	Description	Asbestos Present	Friable	Non-Asbestos Material Present	Sample Location	HM
7-DWJC-04	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Rooms 1B113 & 1B125	3
7-DWJC-05	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C104	
7-DWJC-06	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	
7-DWJC-07	Drywall and Drywall Joint Compound	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1C139	
7-PI1-01	Paper Wrapped Pipe Insulation, Fiberglass Confirmation	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	4
7-PI1-02	Paper Wrapped Pipe Insulation, Fiberglass Confirmation	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	
7-PI1-03	Paper Wrapped Pipe Insulation, Fiberglass Confirmation	NAD	N/A	See Lab Report	1 st Floor, Stair Number 3, Next to Room 1C112	
7-PI1-04	Paper Wrapped Pipe Insulation, Fiberglass Confirmation	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1B146	
7-PI1-05	Paper Wrapped Pipe Insulation, Fiberglass Confirmation	NAD	N/A	See Lab Report	1 st Floor, Corridor Outside Room 1B146	
VA Asbestos Inventory	Brown Seam Sealer on Metal Ducts	2-10% Chrysotile	No	Previous VA Survey Reports	Throughout Above Ceilings	5

NAD – No Asbestos Detected; N/A – Not Applicable

Representative Photographs of Suspect Asbestos Containing Materials



1. White 2' X 2' Ceiling Tile, Small Gouges and Pinholes (HM #1)



2. Brown/Beige Duct Sealant on Foil Wrapped Duct Insulation with Fiberglass (HM #2)



3. Drywall and Drywall Joint Compound (HM #3)



4. Paper Wrapped Pipe Insulation, Fiberglass Confirmation (HM #4)

No Photograph Available

5. Brown Seam Sealer on Metal Ducts (HM #5) – From Previous VA Survey Report

APPENDIX B

Bulk Sample Laboratory Data Sheets

1606K83

Durbin Environmental Consultants, Inc.
 2201 Potomac Place
 Lawrenceville, GA 30043
 Cell (770) 601-7791
 Office (678) 482-9917

SAMPLE CHAIN OF CUSTODY

Project Number: 1606.003 Bulk: Suspect Asbestos

Date: Samples Collected on June 20, 2016, by Michael F. Durbin, CIH

No	Sample ID	NO	Sample ID	No	Sample ID	NO	Sample ID
1.	7-CT1-01	26.	7-P11-05	51.		76.	
2.	7-CT1-02	27.		52.		77.	
3.	7-CT1-03	28.		53.		78.	
4.	7-CT1-04	29.		54.		79.	
5.	7-CT1-05	30.		55.		80.	
6.	7-CT1-06	31.		56.		81.	
7.	7-CT1-07	32.		57.		82.	
8.	7-DM1-01	33.		58.		83.	
9.	7-DM1-02	34.		59.		84.	
10.	7-DM1-03	35.		60.		85.	
11.	7-DM1-04	36.		61.		86.	
12.	7-DM1-05	37.		62.		87.	
13.	7-DM1-06	38.		63.		88.	
14.	7-DM1-07	39.		64.		89.	
15.	7-DWJC-01	40.		65.		90.	
16.	7-DWJC-02	41.		66.		91.	
17.	7-DWJC-03	42.		67.		92.	
18.	7-DWJC-04	43.		68.		93.	
19.	7-DWJC-05	44.		69.		94.	
20.	7-DWJC-06	45.		70.		95.	
21.	7-DWJC-07	46.		71.		96.	
22.	7-P11-01	47.		72.		97.	
23.	7-P11-02	48.		73.		98.	
24.	7-P11-03	49.		74.		99.	
25.	7-P11-04	50.		75.		100.	

Requested Turn-Around Time: Need Results by COB on June 24, 2016

Comments: Asbestos by PLM

Relinquished By: Michael F. Durbin

Received By: Michael F. Durbin

Company: Durbin Environmental Consultants, Inc.

Company: Durbin Environmental Consultants, Inc.

Date: 6/21/16

Date: 6/21/16



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
Bulk Sample Summary Report

NVLAP[®]
 Lab Code 102082-0

22-Jun-16

Client Name:	Durbin Environmental Consultants, Inc.	AES Job Number:	1606K83
Project Name:		Project Number:	1606.003

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
7-CT1-01 Layer: 1	1606K83 -001A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-CT1-02 Layer: 1	1606K83 -002A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-CT1-03 Layer: 1	1606K83 -003A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-CT1-04 Layer: 1	1606K83 -004A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-CT1-05 Layer: 1	1606K83 -005A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-CT1-06 Layer: 1	1606K83 -006A		ND	ND	ND	ND	ND	ND	Paint included as binder

Note: CH-chrysotile, AM-amosite, CR-crocidolite, AC-actinolite, TR-tremolite, AN-anthophyllite

For comments on the samples, see the individual analysis sheets.

ND - None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), 1993.

These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume.

PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials; quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.

This report must not be reproduced except in full without written approval of Analytical Environmental Services, Inc.

Microanalyst:

Elena Ivanova

QC Analyst:

Yelena Khanina

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ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Lab Code 102082-0

22-Jun-16

Client Name:	Durbin Environmental Consultants, Inc.	AES Job Number:	1606K83
Project Name:		Project Number:	1606.003

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
7-CT1-07 Layer: 1	1606K83 -007A		ND	ND	ND	ND	ND	ND	Paint included as binder
7-DM1-01 Layer: 1	1606K83 -008A		ND	ND	ND	ND	ND	ND	
7-DM1-01 Layer: 2	1606K83 -008A		ND	ND	ND	ND	ND	ND	
7-DM1-02 Layer: 1	1606K83 -009A		ND	ND	ND	ND	ND	ND	
7-DM1-02 Layer: 2	1606K83 -009A		ND	ND	ND	ND	ND	ND	
7-DM1-03 Layer: 1	1606K83 -010A		ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.

ND – None Detected

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Microanalyst:

Elena Ivanova

QC Analyst:

Yelena Khamina

Page 3 of 62



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Lab Code 102082-0

22-Jun-16

Client Name:	Durbin Environmental Consultants, Inc.	AES Job Number:	1606K83
Project Name:		Project Number:	1606.003

Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
7-DM1-03 Layer: 2	1606K83 -010A		ND	ND	ND	ND	ND	ND	
7-DM1-04 Layer: 1	1606K83 -011A		ND	ND	ND	ND	ND	ND	
7-DM1-04 Layer: 2	1606K83 -011A		ND	ND	ND	ND	ND	ND	
7-DM1-05 Layer: 1	1606K83 -012A		ND	ND	ND	ND	ND	ND	
7-DM1-05 Layer: 2	1606K83 -012A		ND	ND	ND	ND	ND	ND	
7-DM1-06 Layer: 1	1606K83 -013A		ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.

ND = None Detected

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Microanalyst:


Elena Ivanova

QC Analyst:


Yelena Khanina



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

Bulk Sample Summary Report



Lab Code 102082-0

22-Jun-16

Client Name: Durbin Environmental Consultants, Inc.			AES Job Number: 1606K83						
Project Name:			Project Number: 1606.003						
Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
7-DM1-06 Layer: 2	1606K83 -013A		ND	ND	ND	ND	ND	ND	
7-DM1-07 Layer: 1	1606K83 -014A		ND	ND	ND	ND	ND	ND	
7-DM1-07 Layer: 2	1606K83 -014A		ND	ND	ND	ND	ND	ND	
7-DWJC-01 Layer: 1	1606K83 -015A		ND	ND	ND	ND	ND	ND	
7-DWJC-01 Layer: 2	1606K83 -015A		ND	ND	ND	ND	ND	ND	
7-DWJC-01 Layer: 3	1606K83 -015A		ND	ND	ND	ND	ND	ND	

Note: CH=chrysotile, AM=amosite, CR=crocidolite, AC=actinolite, TR=tremolite, AN=anthophyllite

For comments on the samples, see the individual analysis sheets.

ND = None Detected

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Microanalyst:

Elena Ivanova

QC Analyst:

Yelena Khanina



ANALYTICAL ENVIRONMENTAL SERVICES, INC.
Bulk Sample Summary Report

NVLAP
 Lab Code 102082-0

22-Jun-16

Client Name: Durbin Environmental Consultants, Inc.		AES Job Number: 1606K83							
Project Name:		Project Number: 1606.003							
Client ID	AES ID	Location	Asbestos Mineral Percentage						Comments
			CH	AM	CR	AN	TR	AC	
7-DWJC-02	1606K83-016A		ND	ND	ND	ND	ND	ND	Paint included as binder
Layer: 1									
7-DWJC-02	1606K83-016A		ND	ND	ND	ND	ND	ND	
Layer: 2									
7-DWJC-02	1606K83-016A		ND	ND	ND	ND	ND	ND	
Layer: 3									
7-DWJC-03	1606K83-017A		ND	ND	ND	ND	ND	ND	
Layer: 1									
7-DWJC-03	1606K83-017A		ND	ND	ND	ND	ND	ND	
Layer: 2									
7-DWJC-03	1606K83-017A		ND	ND	ND	ND	ND	ND	
Layer: 3									

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For comments on the samples, see the individual analysis sheets.

ND = None Detected

AES, Inc. is accredited by NIST's National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) analysis, Lab Code 102082-0. All analyses performed in accordance with EPA "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" (EPA 600/M4-82-020), 1982 as found in 40 CFR, Part 763, Appendix E to Subpart E and "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), 1993.

These test results apply only to those samples actually tested, as submitted by the client. All percentages are reported by visually estimated volume.

PLM is not consistently reliable in detecting small concentrations of asbestos in floor tiles and similar nonfriable materials, quantitative TEM is currently the only method that can be used to determine conclusive asbestos content.

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