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- ☐ Work Change Directives

This Document Relates to
Correspondence Dated:

10/24/2007

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RPV

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FILE

ASBESTOS INSPECTION

VAN ZOEREN HALL

**PREPARED FOR:
HOPE COLLEGE
HOLLAND, MICHIGAN**

**OCTOBER 24, 2007
PROJECT NO. G07453E**

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LIST OF ABBREVIATIONS/ACRONYMS

ACM	asbestos-containing material
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FTC&H	Fishbeck, Thompson, Carr & Huber, Inc.
MDEQ	Michigan Department of Environmental Quality

INTRODUCTION

FTC&H was retained by Hope College to conduct an asbestos inspection of Van Zoeren Hall located at 41 Graves Place in Holland, Michigan. The inspection was conducted for ACMs. Based on the information that was provided to FTC&H, the following is known about the facility:

- Original date of construction was not available.
- Building is two stories with a basement.
- Building materials:
 - Floors - vinyl tile, carpet over vinyl tile, carpet, ceramic tile, or cement.
 - Walls – block, drywall, and plaster.
 - Exterior – masonry walls with flat roof.
 - Ceilings – open, suspended, and glued on ceilings.
- Steam fed forced air heating system.
- The facility is used as offices, classrooms, and laboratories.

The inspection was conducted according to the protocol described in the Asbestos Construction Standard, 29 CFR 1926.1101. The inspection did not include roofing materials, destructive sampling, equipment, fiberglass, steel, concrete/mortar/block, ceramic tile, or inaccessible areas/materials. For purposes of this report, fire doors and hatches, and transite countertops were assumed to contain asbestos.

The inspection was conducted on June 1, 2007, in accordance with the Environmental Health Resources, Inc. proposal dated October 25, 2005.

CERTIFICATION

The building inspection was lead by a State of Michigan accredited Asbestos Building Inspector, Mr. Mark A. Lutkenhoff, Accreditation Number A12430. All samples were sent to an independent laboratory for analysis.

INSPECTION PROCEDURES AND SAMPLING METHODOLOGY

The inspection was conducted in a room-by-room fashion. According to the standard, all materials were considered suspect ACMs for sampling purposes. For the purposes of this report, the terms homogeneous area and homogeneous material are used interchangeably. Homogeneous material numbers were arbitrarily selected depending on when they were first identified. The number of samples collected from each homogeneous material was determined depending on the type of material. For

example, at least 3 samples were collected from thermal system insulation. Surfacing materials were sampled according to the size: 3 samples were collected from a material covering less than 1,000 square feet; 5 samples were collected from areas covering 1,001 to less than 3,000 square feet; 7 samples were collected from areas covering more than 3,000 square feet. A minimum of 1 sample was collected from miscellaneous materials. Sample locations were randomly selected by the inspector at the time of the inspection.

The laboratory was instructed to discontinue analyzing samples from a homogeneous material when the first asbestos-containing sample was identified. All layers of the submitted sample were analyzed. Samples with detectable levels of asbestos below the 1% threshold for ACM were, at the request of Hope College and as recommended by the MDEQ, reanalyzed using the EPA Point Count (400 Points) method.

Since only non-destructive sampling methods were employed, FTC&H was unable to collect samples from 1' x 1' glued-on ceiling tile-white with large and small pinholes, 1' x 1' glued-on ceiling tile-white with small pinholes and small fissures, 1'x1' glued-on ceiling tile-white with small fissures, and glue pods attached to all the 1' x 1' glued-on ceiling tiles. These materials should be treated as suspect ACM until samples can be collected.

Mechanical systems were identified and sampled independently as best as could be determined in the field. Fitting insulation was considered a specific part of a mechanical system depending upon the type of insulation (e.g., fiberglass, aircell, mag, etc.).

RESULTS

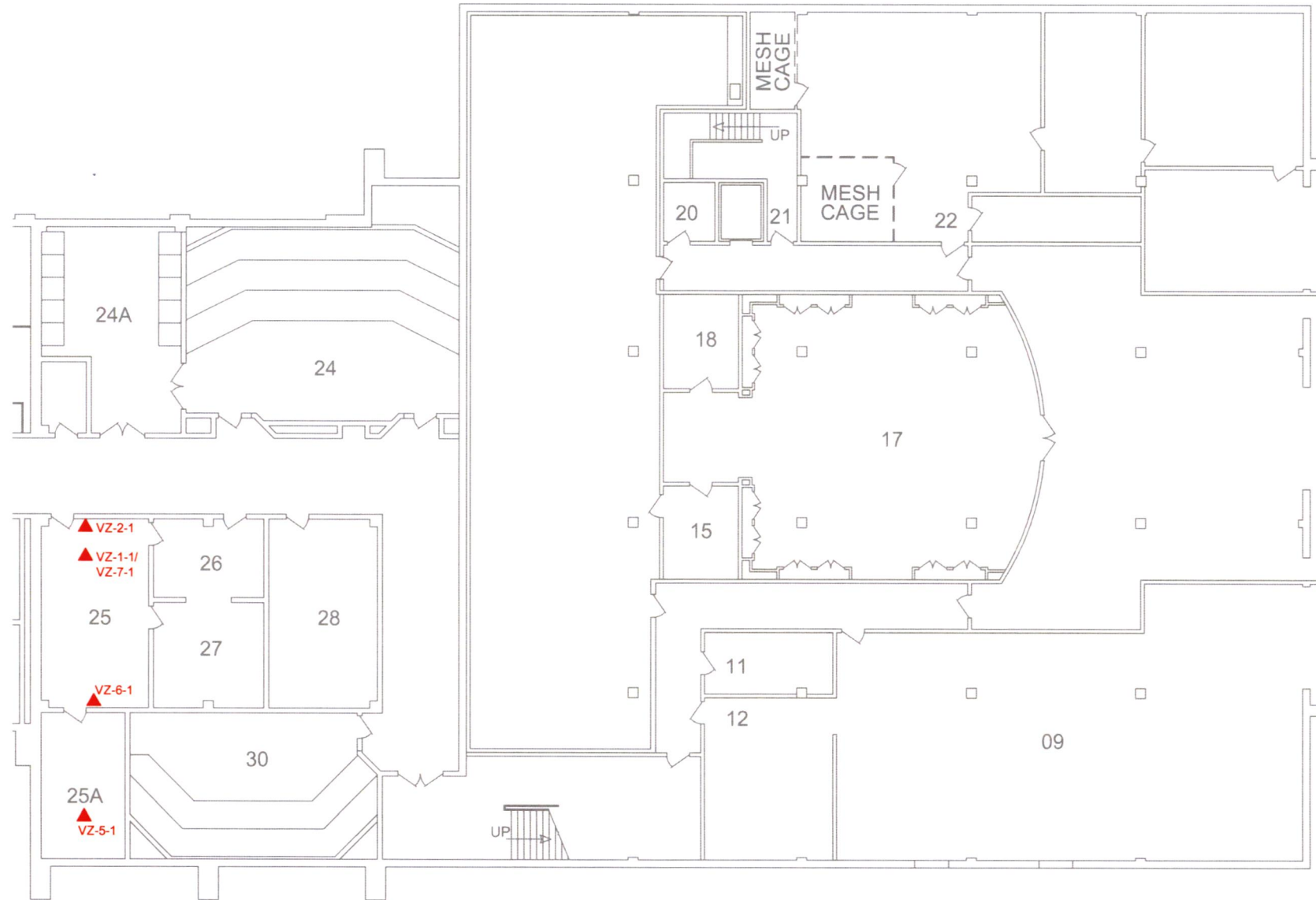
A total of 20 unique homogeneous materials were identified during the inspection, resulting in 29 samples collected and 40 analyses (including layers). Based on analytical results, no homogeneous materials were found to be asbestos containing (greater than 1% asbestos by weight). Two homogeneous materials were found to have detectable levels of asbestos less than 1% asbestos, and were re-analyzed using the EPA Point Count (400 Points) method. These homogeneous materials were confirmed to contain less than 1% asbestos by weight.

Table 1 identifies the homogeneous materials found as a result of the inspection and their corresponding identification number. Table 2 describes each of the sample locations and whether the sample contains asbestos. Table 3 identifies the location and quantities of ACM, and Table 4 is a summary of the asbestos-containing homogeneous materials.

CONCLUSIONS

On June 1, 2007, FTC&H conducted an asbestos inspection of Van Zoeren Hall located at 41 Graves Place in Holland, Michigan. None of 20 unique homogeneous materials identified were found to contain greater than 1% asbestos by weight. Two additional materials had a detectable level of asbestos of less than 1% by weight, and were submitted for EPA Point Count (400 points) analysis. These materials were confirmed to contain less than 1% asbestos by weight. Fire doors and hatches, and transite counter tops were assumed to contain greater than 1% asbestos. 1' x 1' Glued-on ceiling tile-white with large and small pinholes, 1' x 1' glued-on ceiling tile-white with small pinholes and small fissures, 1' x 1' glued-on ceiling tile-white with small fissures, and glue pods attached to all the 1' x 1' glued-on ceiling tiles were not sampled and should be treated as suspect ACM until samples can be collected.

Figures



LEGEND

VZ-5-1 ▲ - SAMPLE LOCATION
(APPROXIMATE)

0 20 40
Scale: 1" = 20'

SAMPLE LOCATION MAP
GROUND FLOOR

Hope College - Van Zoeren Hall

41 Graves Place, Holland, Michigan

Asbestos Inspection Report

PROJECT NO.

G07453E

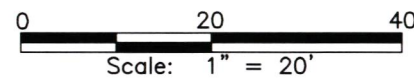
FIGURE NO.

2



LEGEND

VZ-9-3 ▲ - SAMPLE LOCATION
(APPROXIMATE)

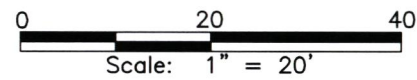


SAMPLE LOCATION MAP
FIRST FLOOR



LEGEND

VZ-9-7 ▲ — SAMPLE LOCATION
(APPROXIMATE)



SAMPLE LOCATION MAP
SECOND FLOOR

Tables

Table 1 • Description of Homogeneous Materials

Asbestos Inspection

Hope College-Van Zoeren Hall

June 1, 2007

HA Number	Material Description	Material Type	Asbestos Containing?
1	2' x 2' Ceiling tile - white with pinholes and fissures	MM	N
2	4" Grey covebase	MM	N
3	1' x 1' Glued-on ceiling tile - white with large and small pinholes	MM	Assumed
4	(replacement tiles)	MM	Assumed
5	2' x 4' ceiling tile - white with pinholes and fissures	MM	N
6	12" x 12"-white with dark grey floor tile	MM	N
7	Sprayed-on fire proofing	SM	N
8	Transite counter tops	MM	Assumed
9	Drywall and drywall joint compound	SM	N
10	1' x 1' Glued-on ceiling tile - white with small fissures	MM	Assumed
11	9" x 9" floor tile; light orange with dark brown	MM	< 1%
12	9" x 9" floor tile white with orange and brown	MM	< 1%
13	4" Brown covebase	MM	N
14	Light orange stair tread	SM	N
15	Grey with white and black stair tread	MM	N
16	Grey with circle pattern	MM	N
17	Plaster	SM	N
18	Fire doors and hatches	MM	Assumed
19	Window caulk	MM	N
20	Masonry caulk	MM	N

Notes:

MM Miscellaneous Material

TSI Thermal System Insulation

SM Surfacing Material

HA Homogeneous Area

Table 2 • Bulk Sample Location Log

Asbestos Inspection
 Hope College-Van Zoeren Hall
 June 1, 2007

Sample Number	Sample Location	Asbestos (%)	Notes
VZ-1-1	Room 25	None Detected	
VZ-2-1	Room 25	None Detected	
VZ-3	No sample collected	Not Analyzed	Ceiling tile and glue pods not sampled
VZ-4	No sample collected	Not Analyzed	Ceiling tile and glue pods not sampled
VZ-5-1	Room 25A	None Detected	
VZ-6-1	Room 25	None Detected	Tile
VZ-6-1A	Room 25	None Detected	Mastic
VZ-7-1	Room 25	None Detected	
VZ-7-2	1st Floor south stairwell	None Detected	
VZ-7-3	Room 151	None Detected	
VZ-7-4	Room 240	None Detected	
VZ-7-5	Room 151	None Detected	
VZ-7-6	Hallway outside room 142	None Detected	
VZ-7-7	Hallway outside room 141	None Detected	
VZ-8	No sample collected	Not Analyzed	Transite counter tops assumed positive
VZ-9-1	Hallway outside room 155	None Detected	Joint compound
VZ-9-1A	Hallway outside room 155	None Detected	Drywall
VZ-9-2	Hallway outside room 160	None Detected	Joint compound
VZ-9-2A	Hallway outside room 160	None Detected	Drywall
VZ-9-3	Hallway outside room 175	None Detected	Joint compound
VZ-9-3A	Hallway outside room 175	None Detected	Drywall
VZ-9-4	Hallway outside room 255	None Detected	Joint compound
VZ-9-4A	Hallway outside room 255	None Detected	Drywall
VZ-9-5	Hallway outside room 288A	None Detected	Joint compound
VZ-9-5A	Hallway outside room 288A	None Detected	Drywall
VZ-9-6	Hallway outside room 292	None Detected	Joint compound
VZ-9-6A	Hallway outside room 292	None Detected	Drywall
VZ-9-7	Room 255 - east wall	None Detected	Joint compound
VZ-9-7A	Room 255 - east wall	None Detected	Drywall
VZ-10	No sample collected	Not Analyzed	Ceiling tile and glue pods not sampled
VZ-11-1	Stairwell near room 150	< 1% Chrysotile	
VZ-12-1	Stairwell near room 150	< 1% Chrysotile	
VZ-13-1	Stairwell near room 150	None Detected	
VZ-14-1	Stairwell near room 150	None Detected	
VZ-15-1	Stairwell near room 150	None Detected	
VZ-16-1	Stairwell near room 150	None Detected	
VZ-17-1	Room 153	None Detected	Finish coat
VZ-17-1	Room 153	None Detected	Brown coat
VZ-17-2	Room 276	None Detected	Finish coat
VZ-17-2	Room 276	None Detected	Brown coat
VZ-17-3	Room 153	None Detected	Finish coat
VZ-17-3	Room 153	None Detected	Brown coat
VZ-18	No sample collected	Not Analyzed	Fire doors and access hatches assumed positive
VZ-19-1	Exterior north side	None Detected	
VZ-20-1	Exterior north side	None Detected	

Table 3 • Room-By-Room Locations of Asbestos Containing Materials

Asbestos Inspection

Hope College-Van Zoeren Hall

June 1, 2007

Location I.D. (Room Number)	Homogeneous Material						
	3	4	8	10	11	12	18
Ground floor							19
1st Floor							36
2nd Floor							65
Ground floor hallway	983	245					
1st Floor hallway	1,248	310					
2nd Floor hallway	1,049	255					
Room 135			40				
Main entry				950			
Stairwell near room 150					50	150	
Totals	3,280 s.f.	810 s.f.	40 s.f.	950 s.f.	50 s.f.	150 s.f.	120 ea.

Notes:

s.f. square feet

l.f. linear feet

ea. each

Table 4 • Summary of Asbestos Containing Homogeneous Materials

Asbestos Inspection

Hope College-Van Zoeren Hall

June 1, 2007

HA Number	Material Description	Asbestos Containing?	Quantity	Unit
3	1' x 1' Glued-on ceiling tile - white with large and small pinholes	Assumed	3,280	s.f.
4	1' x 1' Glued-on ceiling tile - white with small pinholes and small fissures (replacement tiles)	Assumed	810	s.f.
8	Transite counter tops	Assumed	40	s.f.
10	1' x 1' Glued-on ceiling tile - white with small fissures	Assumed	950	s.f.
11	9" x 9" floor tile - light orange with dark brown	< 1%	50	s.f.
12	9" x 9" floor tile - white with orange and brown	< 1%	150	s.f.
18	Fire doors and hatches	Assumed	120	ea.

Notes:

s.f. square feet
l.f. linear feet
ea. each
HA Homogeneous Area

Appendix

**EMSL Analytical, Inc.**

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 Project: **Hope College G07453 Van Zoeren Hall**

Customer ID: FTCH62
 Customer PO:
 Received: 06/05/07 10:00 AM
 EMSL Order: 080701722
 EMSL Proj:
 Analysis Date: 6/6/2007
 Report Date: 6/6/2007

Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
VZ-1-1 080701722-0001		White/Grayish Fibrous Heterogeneous	40% Cellulose 20% Glass	40% Non-fibrous (other)	None Detected
VZ-2-1 080701722-0002		Gray Non-Fibrous Heterogeneous	100% Non-fibrous (other)		None Detected
			Cove Base Only		
VZ-5-1 080701722-0003		Grayish Fibrous Heterogeneous	30% Cellulose 30% Glass	40% Non-fibrous (other)	None Detected
VZ-6-1 080701722-0004		White Non-Fibrous Heterogeneous	100% Non-fibrous (other)		None Detected
			Tile		
VZ-6-1A 080701722-0004A	Mastic	Tan Non-Fibrous Heterogeneous	<1% Cellulose	100% Non-fibrous (other)	None Detected
VZ-7-1 080701722-0005		Gray Fibrous Heterogeneous	<1% Cellulose 85% Glass	15% Non-fibrous (other)	None Detected
VZ-7-2 080701722-0006		Black Fibrous Heterogeneous	<1% Cellulose 80% Glass	20% Non-fibrous (other)	None Detected
VZ-7-3 080701722-0007		Gray Fibrous Heterogeneous	<1% Cellulose 85% Glass	15% Non-fibrous (other)	None Detected

Analyst(s)

Jong-Sim Park (40)

or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

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EMSL Proj:
Analysis Date: 6/6/2007
Report Date: 6/6/2007

**Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized
Light Microscopy**

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
VZ-7-4 080701722-0008		Gray Fibrous Heterogeneous	<1% Cellulose 80% Glass	20% Non-fibrous (other)	None Detected
VZ-7-5 080701722-0009		Gray Fibrous Heterogeneous	3% Cellulose 80% Glass	17% Non-fibrous (other)	None Detected
VZ-7-6 080701722-0010		Gray Fibrous Heterogeneous	<1% Cellulose 80% Glass	20% Non-fibrous (other)	None Detected
VZ-7-7 080701722-0011		Gray Fibrous Heterogeneous	<1% Cellulose 80% Glass	20% Non-fibrous (other)	None Detected
VZ-9-1 080701722-0012		White Non-Fibrous Heterogeneous	Joint Compound		100% Non-fibrous (other) None Detected
VZ-9-1A 080701722-0012A	Dry Wall	White/Brown Fibrous Heterogeneous	20% Cellulose <1% Glass	80% Non-fibrous (other)	None Detected
VZ-9-2 080701722-0013		White Non-Fibrous Heterogeneous	Joint Compound		100% Non-fibrous (other) None Detected
VZ-9-2A 080701722-0013A	Dry Wall	White Non-Fibrous Heterogeneous	<1% Cellulose 1% Glass	99% Non-fibrous (other)	None Detected

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**Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized
Light Microscopy**

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
VZ-9-3 080701722-0014		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
		Joint Compound			
VZ-9-3A 080701722-0014A	Dry Wall	White/Brown Fibrous Heterogeneous	40% Cellulose 2% Glass	58% Non-fibrous (other)	None Detected
VZ-9-4 080701722-0015		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-9-4A 080701722-0015A	Dry Wall	White/Brown Fibrous Heterogeneous	30% Cellulose 1% Glass	69% Non-fibrous (other)	None Detected
VZ-9-5 080701722-0016		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
		Joint Compound			
VZ-9-5A 080701722-0016A	Dry Wall	White/Brown Fibrous Heterogeneous	20% Cellulose <1% Glass	80% Non-fibrous (other)	None Detected
VZ-9-6 080701722-0017		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
		Joint Compound			
VZ-9-6A 080701722-0017A	Dry Wall	White/Brown Fibrous Heterogeneous	30% Cellulose 1% Glass	69% Non-fibrous (other)	None Detected

Analyst(s)

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
VZ-9-7 080701722-0018		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
		Joint Compound			
VZ-9-7A 080701722-0018A	Dry Wall	White/Brown Fibrous Heterogeneous	25% Cellulose <1% Glass	75% Non-fibrous (other)	None Detected
VZ-11-1 080701722-0019		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	<1% Chrysotile
		Tile Only			
VZ-12-1 080701722-0020		Beige/Grayish Non-Fibrous Heterogeneous		100% Non-fibrous (other)	<1% Chrysotile
		Tile Only			
VZ-13-1 080701722-0021		Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-14-1 080701722-0022		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-15-1 080701722-0023		Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-16-1 080701722-0024		Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

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or other approved signatory

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Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
VZ-17-1 080701722-0025		White Non-Fibrous Heterogeneous Finish Coat		100% Non-fibrous (other)	None Detected
VZ-17-1A 080701722-0025A	Brown Coat	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-17-2 080701722-0026		White Non-Fibrous Heterogeneous Finish Coat		100% Non-fibrous (other)	None Detected
VZ-17-2A 080701722-0026A	Brown Coat	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-17-3 080701722-0027		White Non-Fibrous Heterogeneous Finish Coat		100% Non-fibrous (other)	None Detected
VZ-17-3A 080701722-0027A	Brown Coat	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-19-1 080701722-0028		Beige/Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
VZ-20-1 080701722-0029		Beige Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

Jong-Sim Park (40)

or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)



107 Haddon Avenue, Westmont, New Jersey 08108

1-800-220-3675

http://www.emsl.com

1722

EMSL ANALYTICAL, Inc.

CHAIN OF CUSTODY

EMSL Rep:

Third Party Billing requires written authorization from third party

Your Name:

Company:

Street:

Box #:

City/State:

EMSL Bill to:

Street:

Box #:

City/State:

Zip

email

Phone Results to:

Name:

Telephone#:

Project Name/Number:

Fax Results to:

Name:

Fax #:

Purchase Order #:

FTC + H
1515 ARBORETHUM DR.
GRAND RAPIDS MI Zip 49546

SINE

mcclavies@ftch.com
Hole College - 607453
WV 70110N HAI

DAVE LUTENHOFF
616. 464. 3992

TURNAROUND TIME

☐ 3 Hours ☐ 6 Hours ☐ 12 Hours ☒ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ 4 Days ☐ 5 Days ☐ 6-10 Days

SAMPLE MATRIX

☐ Air ☒ Bulk ☐ Soil ☐ Wipe ☐ Micro-Vac ☐ Drinking Water ☐ Wastewater ☐ Chips ☐ Other

ASBESTOS ANALYSIS

PCM - Air

☐ NIOSH 7400 (A) Issue 2: August 1994☐ OSHA w/TWA

TEM AIR

☐ AHERA 40 CFR, Part 763 Subpart E☐ NIOSH 7402 Issue 2☐ EPA Level II

PLM - Bulk

☒ EPA 600/R-93/116☐ NY Stratified Point Count☐ California Air Resource Board (CARB) 435☐ NIOSH 9007☐ PLM NOB (Gravimetric) NYS 198.1☐ EPA Point Count (400 Points)☐ EPA Point Count (1,000 Points)☐ Standard Addition Point Count

SOILS

☐ EPA Protocol Qualitative☐ EPA Protocol Quantitative☐ EMSL MSD 9000 Method fibers/gram☐ Superfund EPA 540-R097-028 (dust generation)

TEM BULK

☐ Drop Mount (Qualitative)☐ Chatfield SOP-1988-02☐ TEM NOB (Gravimetric) NY 198.4

TEM MICROVAC

☐ ASTM D 5755-95 (Quantitative)

TEM WIPE

☐ ASTM D-6480-99☐ Qualitative

TEM WATER

☐ EPA 100.1☐ EPA 100.2☐ NYS 198.2

OTHER:

LEAD ANALYSIS

Flame Atomic Absorption

☐ Wipe, SW846-7420 ☐ ASTM ☐ non ASTM☐ Soil, SW846-7420☐ Air, NIOSH 7082☐ Chips, SW846-7420 or AOAC 5.009 (974.02)☐ Wastewater, SW 846-7420☐ TCLP LEAD SW846-1311/7420

Graphite Furnace Atomic Absorption

☐ Air, NIOSH 7105☐ Wastewater, SW846-7421☐ Soil, SW846-7421☐ Drinking Water, EPA 239.2

ICP - Inductively Coupled Plasma

☐ Wipe, SW846-6010 ☐ ASTM ☐ non ASTM☐ Soil, SW846-6010☐ Air, NIOSH 7300

MATERIALS ANALYSIS

☐ Full Particle Identification☐ Optical Particle Identification☐ Dust Miles and Insect Fragments☐ Particle Size & Distribution☐ Product Comparison☐ Paint Characterization☐ Failure Analysis☐ Corrosion Analysis☐ Glove Box Containment Study☐ Petrographic Examination of Concrete☐ Portland Cement in Workplace Atmospheres☐ (OSHA ID-143)☐ Man Made Vicious Fibers - MMVF's☐ Synthetic Fiber Identification☐ Other

MICROBIAL ANALYSIS

Air Samples

☐ Mold & Fungi by Air-O-Cell☐ Mold & Fungi by Agar Plate count & id☐ Bacterial Count and Gram Stain☐ Bacterial Count and Identification

Water Samples

☐ Total Coliforms, Fecal Coliforms☐ Escherichia Coli, Fecal Streptococcus☐ Legionella☐ Salmonella☐ Giardia and Cryptosporidium

Wipe and Bulk Samples

☐ Mold & Fungi - Direct Examination☐ Mold & Fungi - (Culture follow up to

direct examination if necessary)

☐ Mold & Fungi - Culture (Count & ID)☐ Mold & Fungi - Culture (Count only)☐ Bacterial Count & Gram Stain☐ Bacterial Count & Identification☐ (3 most prominent types)☐ Other:

IAQ ANALYSIS

☐ Nuisance Dust (NIOSH 0500 & 0600)☐ Airborne Dust (PM10, TSP)☐ Silica Analysis by XRD ☐ NIOSH 7500☐ HVAC Efficiency☐ Carbon Black☐ Airborne Oil Mist☐ Other:

Client Sample # (S)

Relinquished:

Received:

Relinquished:

Received:

Date:

Date:

Date:

Date:

TOTAL SAMPLE #

Time:

Time:

Time:

Time:

Page 1 of 2

1Z45005003 9320270Z

1722



107 Haddon Avenue, Westmont, New Jersey 08108

1-800-220-3675

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SAMPLE NUMBER	SAMPLE DESCRIPTION/LOCATION	VOLUME Air (L)	Area (Inches sq.)
VZ-1-1	2x2 CT		
VZ-2-1	Vinyl Base		
VZ-5-1	2x4 CT		
VZ-6-1	12" VAT		
VZ-7-1	SPRAY-ON - ANALYZE TO KIST (+)		
VZ-7-2			
VZ-7-3			
VZ-7-4			
VZ-7-5			
VZ-7-6			
VZ-7-7			
VZ-9-1	DWALL + DWALL JC ANALYZE TO ISF (+)		
VZ-9-2			
VZ-9-3			
VZ-9-4			
VZ-9-5			
VZ-9-6			
VZ-9-7			
VZ-11-1	9" VAT		
VZ-12-1	9" VAT		
VZ-13-1	Vinyl Base		
VZ-14-1	SPAWN MEMO		
VZ-15-1	SPAWN MEMO		
VZ-16-1	SPAWN MEMO		
VZ-17-1	PLASMA		
VZ-17-2			
VZ-17-3			
VZ-19-1	WINDOW CAVITY		

Relinquished:
Received:
Relinquished:
Received:

Carl Smith

Date:
Date:
Date:
Date:

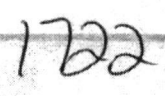
6/1/07

Time:
Time:
Time:
Time:

1631

1Z4500500393202702

Page 2 of 2



1-800-220-3675

<http://www.emsl.com>

[illegible]

Relinquished:
Received:
Relinquished:
Received:

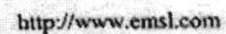
Be ready

Date:
Date:
Date:
Date:

6/1/07

Time:
Time:
Time:
Time:

1630

[illegible]

Page 2 of 2

**EMSL Analytical, Inc.**

212 South Wagner Road, Ann Arbor, MI 48103

Phone: (734) 668-6810 Fax: 7346688532 Email: annarborlab@emsl.com

Attn: **Reuben P. Van Dam**
Fishbeck, Thompson, Carr & Huber
1515 Arboretum Drive SE
Grand Rapids, MI 49546

Fax: (616) 464-3992 Phone: (616) 464-3749

Project: **G07453 E HOPE COLLEGE**

Customer ID: FTCH62
Customer PO:
Received: 06/13/07 6:30 PM
EMSL Order: 080701825

EMSL Proj:
Analysis Date: 6/21/2007
Report Date: 6/21/2007

Asbestos Analysis of Bulk Material via EPA 600/R-93/116. Quantitation using 400 Point Count Procedure.

Sample	Location	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
VZ-11-1 080701825-0001		Tan Fibrous Heterogeneous	1.50% Cellulose	97.75% Non-fibrous (other)	0.75% Chrysotile
VZ-12-1 080701825-0002		Gray Fibrous Heterogeneous		99.50% Non-fibrous (other)	0.50% Chrysotile

Analyst(s)

Orlando J. Ivey II (2)

or other approved signatory

Disclaimer: Some samples may contain asbestos fibers present in dimensions below PLM resolution limits. EMSL Analytical Inc suggests that samples reported as <0.25% or none detected undergo additional analysis via TEM. The above test report relates only to the items tested. This report may not be reproduced, except in full, without written approval of EMSL Analytical Inc. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government. EMSL Analytical Inc., bears no responsibility for sample collection activities, analytical method limitations, or the accuracy of results when requested to separate layered samples. EMSL Analytical Inc., liability is limited to the cost of sample analysis. The test results contained within this report meet the requirements of NELAC unless otherwise noted. Samples received in good condition unless otherwise noted.

Analysis performed by EMSL Ann Arbor (NVLAP #101048-4)

080701825

Page 1 of 2



Chain of Custody

Asbestos Lab Services

EMSL Analytical, Inc.
212 S. Wagner Rd.
Ann Arbor, MI 48103

Phone: (734) 668-6810
Fax: (734) 668-8532
<http://www.emsl.com>

Please print all information legibly.

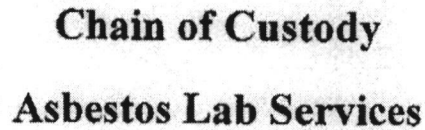
Company:	Fishbeck, Thompson, Carr & Huber, Inc.	Bill To:	Fishbeck, Thompson, Carr & Huber, Inc.
Address1:	1515 Arboretum Dr.	Address1:	1515 Arboretum Dr.
Address2:		Address2:	
City, State:	Grand Rapids, Michigan	City, State:	Grand Rapids, Michigan
Zip/Post Code:	49546	Zip/Post Code:	49546
Country:	USA	Country:	USA
Contact Name:	Reuben P. Van Dam	Attn:	Deb Shroufe
Phone:	616-464-3833	Phone:	616-464-3708
Fax:	616-464-3992	Fax:	616-464-3994
Email:	mcdavies@ftch.com / rp.vandam@ftch.com		
EMSL Rep:		P.O. Number:	
Project Name/Number: C-07453 E - Hope College - Van Zoeren Hall			

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 (1 day)
<input type="checkbox"/> Bulk	<input type="checkbox"/> Drinking Water		<input type="checkbox"/> 48 Hours (2 days)	<input type="checkbox"/> 72 Hours (3 days)	<input type="checkbox"/> 96 Hours (4 days)	<input type="checkbox"/> 120 Hours (5 days)
<input type="checkbox"/> Wipe	<input type="checkbox"/> Wastewater		<input checked="" 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

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



Phone: (734) 668-6810
Fax: (734) 668-8532
<http://www.emsl.com>

Total Samples #: 3

Time: _____

Time: _____

Time: _____

Time: _____

06/13/2007 16:28 FAX 616 464 3992

**QC Documentation
Environmental Services Department**

Project Name <u>Hoge College / Vander Werf</u>			
Project Number <u>G07453E</u>			
Project Manager <u>DL</u>			
Document Title <u>Abatement report Van Zoeren Hall</u>			
Document type			
Report/Letter	<input checked="" type="checkbox"/>	QAPP	<input type="checkbox"/>
Work Plan	<input type="checkbox"/>	HASP	<input type="checkbox"/>
Permit	<input type="checkbox"/>	Proposal	<input type="checkbox"/>
		Env. Mgmt. Plan	<input type="checkbox"/>
		Technical Memo	<input type="checkbox"/>
		Other	<input type="checkbox"/>
Check items included for review:			
Draft text	<input checked="" type="checkbox"/>	Appendices	<input checked="" type="checkbox"/>
Figures	<input type="checkbox"/>	Supporting documentation	<input type="checkbox"/>
Tables	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>
		Other	<input type="checkbox"/>
		Other	<input type="checkbox"/>
Draft Text Review			
Date created:	<u>RPV</u>	Date reviewed:	<u>10/17/07</u> <u>10/22/07</u>
Author:	<u>8/24/07</u>	Reviewed by:	<u>MCD</u> <u>DL</u>
Edits required:	<input checked="" type="checkbox"/> yes	Comments:	<u>see text</u>
	<input type="checkbox"/> no		
Figures Review			
Date created:	<u>8</u>	Date reviewed:	
Created by:		Reviewed by:	
Edits required:	<input type="checkbox"/> yes	Comments:	
	<input type="checkbox"/> no		
Tables Review			
Date created:	<u>8/24/07</u>	Date reviewed:	<u>10/17/07</u> <u>10/22/07</u>
Created by:	<u>RPV</u>	Reviewed by:	<u>MCD</u> <u>DL</u>
Edits required:	<input type="checkbox"/> yes	Comments:	
	<input checked="" type="checkbox"/> no		
Appendices Review			
Date created:	<u>8/24/07</u>	Date reviewed:	<u>10/17/07</u>
Compiled by:	<u>RPV</u>	Reviewed by:	<u>MCD</u>
Edits required:	<input type="checkbox"/> yes	Comments:	
	<input checked="" type="checkbox"/> no		
Additional Review Comments/Notes			
Revisions/Edits			
Completed on:		Comments:	
Completed by:			