MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35101 - 005	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA6-1
Location	487 Frasier-room 487-2, wall 1st floor				
Type_Mat	drywall				

Gross Visual Multi layered paints on brown ribbony fiber felt on light gray chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	15

NON FIBROUS COMPONENTS

Opaques	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35101 - 006	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA6-3
Location	487 Frasier-room 487-24, wall 2nd floor				
Type_Mat	drywall				

Gross Visual White fine grained compound on tape on white fine grained compound on brown ribbony fiber felt on light gray chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	22

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35101 - 007	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA6-4
Location	487 Frasier-room 487-31, ceiling 2nd floor				
Type_Mat	drywall				

Gross Visual Multi layered paints on brown ribbony fiber felt on light gray chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	15

NON FIBROUS COMPONENTS	
Opaques	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

ATLANTA
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3945 Lakefield Court
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www.mastest.com

February 21, 2005

John O'Brien
Geo-Hydro Engineers
1000 Cobb Place Boulevard Suite 290
Kennesaw, GA 30144

RE: PLM Sample Analysis
057929.01 / Frasier Street Apartment Bldg.

Dear Mr. O'Brien:

Enclosed is a summary and the analysis of the samples which were delivered to MAS on February 18, 2005. It was requested that we analyze these samples using polarized light microscopy (PLM) to determine the percentage of asbestos.

The samples were analyzed in accordance with EPA document 600/R-93/116, 'Method for the Determination of Asbestos in Bulk Building Materials'. These analysis results relate only to the specific items analyzed. Any partial reproduction of the Bulk Analysis Report may not be made without the consent of Materials Analytical Services. This report may not be used to imply product endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government.

Materials Analytical Services appreciates this opportunity to have been of service to you. We look forward to working with you on future projects.

Sincerely,

WBE

William B. Egeland, P.G.

Enc. M35099

REQUEST E-MAIL
RESULTS IN 48-HOURS

M35099

e-mail Jobrien@geohydro.com

CHAIN OF CUSTODY

Bulk

MAS

Co. Name: Geo-Hydro Engineers
Address: 1000 Cobb Place Blvd
Kennesaw, Georgia 30144

Phone: 770-426-7100
Fax: 770-426-5209

3945 Lakefield Court
Suwanee, Georgia 30024
PH: (770) 866-3200
FAX: (770) 866-3259

Project #: 057929.01
Project Name: Frasier Street
Work Area Description: Apartment Bldg.
Project Representative: John O'Brien
MAS Project Number:

Sheet 1 of 1

16FEB05	HA400-1	494 Frasier - Rear	Brown Fibrous Siding
	HA401-1	494 Frasier -	Floor Tile (Beige + Green)
			Mastic - Brown
	HA402-1	494 Frasier	Dry Wall
	HA402-2	494 Frasier	Dry Wall

	17FEB05	UPS		
First Transfer By:	John O'Brien		2/18/05	
Second Transfer By:				
Third Transfer By:				

Please show % asbestos in joint compound separate from drywall % asbestos

MATERIALS ANALYTICAL SERVICES, INC.
3945 LAKEFIELD COURT
SUWANEE, GA 30024
(770) 866-3200

Client: Geo-Hydro Engineers
Job Name: Frasier Street Apartment Bldg.
Job Number: 057929.01
Reviewer:

Summary of Results of analysis by Polarized Light Microscopy (PLM)

CLIENT #	MAS ID # - SPL #	LOCATION	MATERIAL	ANALYSIS
HA400-1	M35099- 001	494 Frasier-rear	brown fibrous siding	NO ASBESTOS OBSERVED
HA401-1	M35099- 002Aa	494 Frasier	beige & green tiles with brown mastic	15% Chrysotile
HA401-1	M35099- 002Ab	494 Frasier	mastics	NO ASBESTOS OBSERVED
HA401-1	M35099- 002Ba	494 Frasier	beige & green tiles with brown mastic	18% Chrysotile
HA401-1	M35099- 002Bb	494 Frasier	mastics	NO ASBESTOS OBSERVED
HA402-1	M35099- 003	494 Frasier	drywall	NO ASBESTOS OBSERVED
HA402-2	M35099- 004a	494 Frasier	drywall	4% Chrysotile
HA402-2	M35099- 004b	494 Frasier	drywall	NO ASBESTOS OBSERVED

The samples were analyzed in accordance with EPA document 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials". This report relates only to items tested as received, and may not be used to claim endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government. This report may not be reproduced except in full without the approval of Materials Analytical Services, Incorporated (NVLAP # 101235).

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 001	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA400-1
Location	494 Frasier-rear				
Type_Mat	brown fibrous siding				

Gross Visual Beige paint on brown compressed body of ribbony and woody fibers

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -rib&woody	97

NON FIBROUS COMPONENTS	
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 002Aa	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA401-1
Location	494 Frasier				
Type_Mat	beige & green tiles with brown mastic				

Gross Visual Tannish beige fine grained tile

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/1.545		
Sign^	positive		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	15
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 002Ab	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA401-1
Location	494 Frasier				
Type_Mat	mastics				

Gross Visual Yellow gold adhesive and tarry adhesive

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	2

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 002Ba	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA401-1
Location	494 Frasier				
Type_Mat	beige & green tiles with brown mastic				

Gross Visual Green fine grained tile, fibers visible on fracture

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/1.545		
Sign^	positive		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	18
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 002Bb	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA401-1
Location	494 Frasier				
Type_Mat	mastics				

Gross Visual Amber beige adhesives

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	2

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 003	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA402-1
Location	494 Frasier				
Type_Mat	drywall				

Gross Visual Off-white paint on white fine grained compound and drywall

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	17

NON FIBROUS COMPONENTS

Opaques	X
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 004a	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA402-2
Location	494 Frasier				
Type_Mat	drywall				

Gross Visual Paints on off-white fine grained compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/1.545		
Sign^	positive		
Extinction	arallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	4
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	1

NON FIBROUS COMPONENTS

Opaques	X
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35099 - 004b	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA402-2
Location	494 Frasier				
Type_Mat	drywall				

Gross Visual Tan felt on off-white chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	15

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

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3945 Lakefield Court
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FAX (408) 737-9791

www.mastest.com

February 21, 2005

John O'Brien
Geo-Hydro Engineers
1000 Cobb Place Boulevard Suite 290
Kennesaw, GA 30144

RE: PLM Sample Analysis
057929.01 / Frasier Street Apartment Bldg.

Dear Mr. O'Brien:

Enclosed is a summary and the analysis of the samples which were delivered to MAS on February 18, 2005. It was requested that we analyze these samples using polarized light microscopy (PLM) to determine the percentage of asbestos.

The samples were analyzed in accordance with EPA document 600/R-93/116, 'Method for the Determination of Asbestos in Bulk Building Materials'. These analysis results relate only to the specific items analyzed. Any partial reproduction of the Bulk Analysis Report may not be made without the consent of Materials Analytical Services. This report may not be used to imply product endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government.

Materials Analytical Services appreciates this opportunity to have been of service to you. We look forward to working with you on future projects.

Sincerely,

WBE

William B. Egeland, P.G.

Enc. M35100

REQUEST E-MAIL RESULTS
IN 48-HOURS

M35100

e-mail Jobrien@geohydro.com

CHAIN OF CUSTODY

Bulk

MAS

Co. Name: Geo-Hydro Engineering Phone: 770-426-7100
Address: 1000 Cobb Place Blvd Fax: 770-426-5209
Kennesaw, Georgia 30144

3945 Lakefield Court
Suwanee, Georgia 30024
PH: (770) 866-3200
FAX: (770) 866-3259

Project #: 057929.01
Project Name: Frasier Street
Work Area Description: Apartment Bldg
Project Representative: John O'Brien
MAS Project Number:

Sheet 1 of 1

16 FEB 05	HA 500-1	275 Manget	Floor Tile [illegible] Mastic (Yellow)
	HA 501-1	275 Manget	Drywall
	HA 501-2	275 Manget	Drywall
	HA 502-1	275 Manget - Front	Particle Board Siding
	HA 503-1	275 Manget - Front	Cement Board Siding + Paper

	17 FEB 05	GPS		
First Transfer By:	John O'B		2/18/05	[illegible]
Second Transfer By:				
Third Transfer By:				

Please show % asbestos in joint compound separate from drywall % asbestos.

MATERIALS ANALYTICAL SERVICES, INC.
3945 LAKEFIELD COURT
SUWANEE, GA 30024
(770) 866-3200

Client: Geo-Hydro Engineers
Job Name: Frasier Street Apartment Bldg.
Job Number: 057929.01
Reviewer:

Summary of Results of analysis by Polarized Light Microscopy (PLM)

CLIENT #	MAS ID # - SPL #	LOCATION	MATERIAL	ANALYSIS
HA500-1	M35100- 001	275 Manget	gray floor tile & yellow mastic	NO ASBESTOS OBSERVED
HA501-1	M35100- 002	275 Manget	drywall	NO ASBESTOS OBSERVED
HA501-2	M35100- 003	275 Manget	drywall	NO ASBESTOS OBSERVED
HA502-1	M35100- 004	275 Manget-front	particle board siding	NO ASBESTOS OBSERVED
HA503-1	M35100- 005a	275 Manget-front	cement board siding	20% Chrysotile
HA503-1	M35100- 005b	275 Manget-front	felt	NO ASBESTOS OBSERVED

The samples were analyzed in accordance with EPA document 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials". This report relates only to items tested as received, and may not be used to claim endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government. This report may not be reproduced except in full without the approval of Materials Analytical Services, Incorporated (NVLAP # 101235).

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35100 - 001	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA500-1
Location	275 Manget				
Type_Mat	gray floor tile & yellow mastic				

Gross Visual Marbled tan fine grained tile with yellow gummy adhesive, white fine grained compound adhering to adhesive

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	Trace

NON FIBROUS COMPONENTS

Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35100 - 002	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA501-1
Location	275 Manget				
Type_Mat	drywall				

Gross Visual White fine grained compounds with ribbony fiber tape, tan felt and light gray chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	15

NON FIBROUS COMPONENTS

Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35100 - 003	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA501-2
Location	275 Manget				
Type_Mat	drywall				

Gross Visual Off-white paint on white fine grained compound with ribbony fiber tan felt and light gray chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	12

NON FIBROUS COMPONENTS

Opaques	X
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35100 - 004 **Analyst** Paul Hess **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA502-1

Location 275 Manget-front

Type_Mat particle board siding

Gross Visual Brown compressed fibrous material

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -rib&woody	97

NON FIBROUS COMPONENTS	
Opaques	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35100 - 005a	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA503-1
Location	275 Manget-front				
Type_Mat	cement board siding				

Gross Visual Light gray cementitious panel with weathered tan paint surface showing fibers

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/1.545		
Sign^	positive		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	20
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Opaques	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35100 - 005b	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA503-1
Location	275 Manget-front				
Type_Mat	felt				

Gross Visual Black tarry felt with micaceous surface

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -rib&woody	60

NON FIBROUS COMPONENTS	
Mica	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

ATLANTA
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Suwanee, GA 30024
(770) 866-3200 FAX (770) 866-3259

MAS

MATERIALS ANALYTICAL SERVICES, INC.

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Raleigh, NC 27606
(919) 829-7041
FAX (919) 829-5518

SUNNYVALE
285 North Wolfe Road
Suite 101
Sunnyvale, CA 94085
(408) 737-9700
FAX (408) 737-9791

WASHINGTON, DC
107 Ridgely Avenue
Suite 13A
Annapolis, MD 21401
(410) 280-0505
FAX (410) 269-2828

www.mastest.com

February 21, 2005

John O'Brien
Geo-Hydro Engineers
1000 Cobb Place Boulevard Suite 290
Kennesaw, GA 30144

RE: PLM Sample Analysis
057929.01 / Frasier Street Apartment Bldg.

Dear Mr. O'Brien:

Enclosed is a summary and the analysis of the samples which were delivered to MAS on February 18, 2005. It was requested that we analyze these samples using polarized light microscopy (PLM) to determine the percentage of asbestos.

The samples were analyzed in accordance with EPA document 600/R-93/116, 'Method for the Determination of Asbestos in Bulk Building Materials'. These analysis results relate only to the specific items analyzed. Any partial reproduction of the Bulk Analysis Report may not be made without the consent of Materials Analytical Services. This report may not be used to imply product endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government.

Materials Analytical Services appreciates this opportunity to have been of service to you. We look forward to working with you on future projects.

Sincerely,

William B. Egeland, P.G.

Enc. M35102

REQUEST E-MAIL RESULTS
IN 48-HOURS

M35102

e-mail: Jobrien@geohydro.com

CHAIN OF CUSTODY

Bulk

MAS

3945 Lakefield Court
Suwanee, Georgia 30024
PH: (770) 866-3200
FAX: (770) 866-3259

Co. Name: Geo-Hydro Engineers Phone: 770-426-7100
Address: 1000 Cobb Place Blvd Fax: 770-426-5209
Kennesaw, Georgia 30144

Project #: 057929-01
Project Name: Frasier Street
Work Area Description: Single Family House
Project Representative: John O'Brien
MAS Project Number:

Sheet 1 of 1

Date	Sample No.	Sample Location	Sample Description
15Feb05	HA300-1	489 Haley - Roof	Roof Shingle / Roof Paper
	HA301-1	489 Haley - Exterior	Siding Shingle
	HA302-1	489 Haley - Room A	Floor Sheeting Yellow w/Blue Layers
	HA303-1	489 Haley - Bath	Floor Sheeting Beige
	HA304-1	489 Haley - Room B	Floor Sheeting Gray w/ specs
	HA [illegible]	489 [illegible]	Floor Sheeting Green Gray Beige
	HA309-1	489 Haley - Kitchen	Floor Sheeting Green
	HA305-1	489 Haley - Kitchen	Floor Tile Beige / Mastic Black
	HA308-R	489 Haley - Bath	Floor Tile Beige / Mastic Brown
	HA306-1	489 Haley - Room B Ceiling	Dry Wall

	Date	Time	Signature
First Transfer By:	17Feb05	UPS	
Second Transfer By:		2/18/05	
Third Transfer By:			

Please show % asbestos in joint compound separate from drywall.

MATERIALS ANALYTICAL SERVICES, INC.
3945 LAKEFIELD COURT
SUWANEE, GA 30024
(770) 866-3200

Client: Geo-Hydro Engineers
Job Name: Frasier Street Apartment Bldg.
Job Number: 057929.01
Reviewer: _____

Summary of Results of analysis by Polarized Light Microscopy (PLM)

CLIENT #	MAS ID # - SPL #	LOCATION	MATERIAL	ANALYSIS
HA300-1	M35102- 001a	489 Haley-roof	roof shingle/felt	NO ASBESTOS OBSERVED
HA300-1	M35102- 001b	489 Haley-roof	mastic on roof shingle/felt	7% Chrysotile
HA301-1	M35102- 002	489 Haley-exterior	siding shingle	NO ASBESTOS OBSERVED
HA302-1	M35102- 003a	489 Haley-room A	floor sheeting/blue layer	NO ASBESTOS OBSERVED
HA302-1	M35102- 003b	489 Haley-room A	floor sheeting/yellow layer	NO ASBESTOS OBSERVED
HA303-1	M35102- 004	489 Haley-bath	floor sheeting beige	NO ASBESTOS OBSERVED
HA304-1	M35102- 005a	489 Haley-room B	floor sheeting green gray beige	NO ASBESTOS OBSERVED
HA304-1	M35102- 005b	489 Haley-room B	floor sheeting speckled gray	NO ASBESTOS OBSERVED
HA309-1	M35102- 006	489 Haley-kitchen	floor sheeting green	NO ASBESTOS OBSERVED
HA305-1	M35102- 007a	489 Haley-kitchen	beige floor tile	5% Chrysotile
HA305-1	M35102- 007b	489 Haley-kitchen	black mastic under beige floor tile	NO ASBESTOS OBSERVED
HA308-2	M35102- 008a	489 Haley-bath	beige floor tile	5% Chrysotile
HA308-2	M35102- 008b	489 Haley-bath	brown mastic under beige floor tile	NO ASBESTOS OBSERVED
HA306-1	M35102- 009a	489 Haley-room c ceiling	joint compound on drywall	5% Chrysotile
HA306-1	M35102- 009b	489 Haley-room c ceiling	drywall	NO ASBESTOS OBSERVED

The samples were analyzed in accordance with EPA document 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials". This report relates only to items tested as received, and may not be used to claim endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government. This report may not be reproduced except in full without the approval of Materials Analytical Services, Incorporated (NVLAP # 101235).

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35102 - 001a **Analyst** Derrill Duncan **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA300-1

Location 489 Haley-roof

Type_Mat roof shingle/felt

Gross Visual Green surface aggregate shingles with black tar felts

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	30
Synthetic -melts	10

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 001b	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA300-1
Location	489 Haley-roof				
Type_Mat	mastic on roof shingle/felt				

Gross Visual Black mastic

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	Wavy
Pleochroism	none
Refract Index	1.555/1.545
Sign^	+
Extinction	parallel
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	7
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	Trace

NON FIBROUS COMPONENTS

Opaques	X
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 002	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA301-1
Location	489 Haley-exterior				
Type_Mat	siding shingle				

Gross Visual Red surface aggregate shingle with tar felt

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	30
Synthetic -melts	5
Hair -medulla/scales	5

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected. No mastic observed on felt.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 003a	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA302-1
Location	489 Haley-room A				
Type_Mat	floor sheeting/blue layer				

Gross Visual Blue floor sheeting

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	50
Synthetic -melts	5
Hair -medulla/scales	5

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 003b	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA302-1
Location	489 Haley-room A				
Type_Mat	floor sheeting/yellow layer				

Gross Visual Yellow floor sheeting

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	50
Synthetic -melts	10

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 004	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA303-1
Location	489 Haley-bath				
Type_Mat	floor sheeting beige				

Gross Visual Beige vinyl on white spongy foam with fibrous backing

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	40
Fib glass -isotropic	5

NON FIBROUS COMPONENTS	
Synthetic foam	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 005a	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA304-1
Location	489 Haley-room B				
Type_Mat	floor sheeting green gray beige				

Gross Visual Green gray floor sheeting

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	40
Synthetic -melts	5
Hair -medulla/scales	5

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35102 - 005b **Analyst** Derrill Duncan **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA304-1

Location 489 Haley-room B

Type_Mat floor sheeting speckled gray

Gross Visual Speckled gray flooring

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	40
Synthetic -melts	5
Hair -medulla/scales	5

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 006	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA309-1
Location	489 Haley-kitchen				
Type_Mat	floor sheeting green				

Gross Visual Green floor sheeting

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	40
Synthetic -melts	5
Hair -medulla/scales	5

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 007a	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA305-1
Location	489 Haley-kitchen				
Type_Mat	beige floor tile				

Gross Visual Beige floor tile

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	Wavy		
Pleochroism	none		
Refract Index	1.555/1.545		
Sign^	+		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	5
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Opaques	X
Talc	X
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35102 - 007b **Analyst** Derrill Duncan **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA305-1

Location 489 Haley-kitchen

Type_Mat black mastic under beige floor tile

Gross Visual Gold mastic

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	

NON FIBROUS COMPONENTS	
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 008a	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA308-2
Location	489 Haley-bath				
Type_Mat	beige floor tile				

Gross Visual Beige floor tile

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	Wavy
Pleochroism	none
Refract Index	1.555/1.545
Sign^	+
Extinction	parallel
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile	5
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35102 - 008b **Analyst** Derrill Duncan **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA308-2

Location 489 Haley-bath

Type_Mat brown mastic under beige floor tile

Gross Visual Gold mastic

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Cellulose -ribbony	Trace

NON FIBROUS COMPONENTS

Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 009a	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA306-1
Location	489 Haley-room c ceiling				
Type_Mat	joint compound on drywall				

Gross Visual Cream granular compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	Wavy
Pleochroism	none
Refract Index	1.555/1.545
Sign^	+
Extinction	parallel
Birefringence	low
Melt	no
Fiber Name	Chrysotile

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	5
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35102 - 009b	**Analyst**	Derrill Duncan	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA306-1
Location	489 Haley-room c ceiling				
Type_Mat	drywall				

Gross Visual Ribbony fiber felt on white matrix

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %** NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	10

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
CHAIN-OF-CUSTODY

CLIENT: Geo-Hydro Engineers
CONTACT: John O'Brien
PHONE: (770) 426-7100
CLIENT JOB NAME: Frasier Street Apartment Bldg.
CLIENT JOB#: 057929.01
CLIENT DOC(S): COC
FAX NUMBER: (770) 426-5209

MAS JOB: M35102
DATE RECEIVED: 2/18/2005
SUBMITTED BY: John O'Brien
TRANSPORT: FedEx
RECEIVED BY: Alesa Smith
CONDITION: OK

MAS #	CLIENT ID	VOLUME	TYPE MATERIAL
001a	HA300-1		roof shingle/felt
LOCATION	489 Haley-roof		
001b	HA300-1		mastic on roof shingle/felt
LOCATION	489 Haley-roof		
002	HA301-1		siding shingle
LOCATION	489 Haley-exterior		
003a	HA302-1		floor sheeting/blue layer
LOCATION	489 Haley-room A		
003b	HA302-1		floor sheeting/yellow layer
LOCATION	489 Haley-room A		
004	HA303-1		floor sheeting beige
LOCATION	489 Haley-bath		
005a	HA304-1		floor sheeting green gray beige
LOCATION	489 Haley-room B		
005b	HA304-1		floor sheeting speckled gray
LOCATION	489 Haley-room B		
006	HA309-1		floor sheeting green
LOCATION	489 Haley-kitchen		
007a	HA305-1		beige floor tile
LOCATION	489 Haley-kitchen		
007b	HA305-1		black mastic under beige floor tile
LOCATION	489 Haley-kitchen		
008a	HA308-2		beige floor tile
LOCATION	489 Haley-bath		
008b	HA308-2		brown mastic under beige floor tile
LOCATION	489 Haley-bath		
009a	HA306-1		joint compound on drywall
LOCATION	489 Haley-room c ceiling		
009b	HA306-1		drywall
LOCATION	489 Haley-room c ceiling		

INITIAL FILE REVIEW: _____ **DATE:** 2/21/2005
SAMPLE PREP BY: _____ **DATE:** 2/21/2005
SAMPLE ANALYSIS BY: _____ **DATE:** 2/21/2005
COMMENT: _____

Materials Analytical Services, Inc.
3945 Lakefield Court
Suwanee, Georgia 30024
(770) 866-3200

ATLANTA
Corporate Headquarters
3945 Lakefield Court
Suwanee, GA 30024
(770) 866-3200 FAX (770) 866-3259

MAS
MATERIALS ANALYTICAL SERVICES, INC.

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Suite 300
Seal Beach, CA 90740
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RALEIGH
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FAX (919) 829-5518

SUNNYVALE
285 North Wolfe Road
Suite 101
Sunnyvale, CA 94085
(408) 737-9700
FAX (408) 737-9791

www.mastest.com

February 21, 2005

John O'Brien
Geo-Hydro Engineers
1000 Cobb Place Boulevard Suite 290
Kennesaw, GA 30144

RE: PLM Sample Analysis
057929.01 / Frasier Street Apartment Bldg.

Dear Mr. O'Brien:

Enclosed is a summary and the analysis of the samples which were delivered to MAS on February 18, 2005. It was requested that we analyze these samples using polarized light microscopy (PLM) to determine the percentage of asbestos.

The samples were analyzed in accordance with EPA document 600/R-93/116, 'Method for the Determination of Asbestos in Bulk Building Materials'. These analysis results relate only to the specific items analyzed. Any partial reproduction of the Bulk Analysis Report may not be made without the consent of Materials Analytical Services. This report may not be used to imply product endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government.

Materials Analytical Services appreciates this opportunity to have been of service to you. We look forward to working with you on future projects.

Sincerely,

WBE

William B. Egeland, P.G.

Enc. M35104

REQUEST RESULTS E-MAILED BY 48-HOURS

M35704

E-mail: Jibrian@geohydro.com

CHAIN OF CUSTODY

Bulk

MAS

Co. Name: Geo-Hydro Engineers Phone: 770-426-7100
Address: 1000 Cobb Place Blvd Fax: 770-426-5209
Kennesaw, Georgia 30144

3945 Lakefield Court
Suwanee, Georgia 30024
PH: (770) 866-3200
FAX: (770) 866-3259

Project #: 05 7929.01
Project Name: Frasier Street
Work Area Description: Single Family House
Project Representative: John O'Brien
MAS Project Number:

Sheet 1 of 1

15Feb05	HA200-2	495 Haley - Roof	Roof Shingle + Felt
↓	HA201-1	495 Haley - Exterior	Single Siding + Paper
↓	HA203-1	495 Haley - Interior	Dry Wall

First Transfer By:	17FEB05 John OB	UPS	2/18/05	[illegible]
Second Transfer By:				
Third Transfer By:				

Please report % asbestos in joint compound separate from drywall.

MATERIALS ANALYTICAL SERVICES, INC.
3945 LAKEFIELD COURT
SUWANEE, GA 30024
(770) 866-3200

Client: Geo-Hydro Engineers
Job Name: Frasier Street Apartment Bldg.
Job Number: 057929.01
Reviewer:

Summary of Results of analysis by Polarized Light Microscopy (PLM)

CLIENT #	MAS ID # - SPL #	LOCATION	MATERIAL	ANALYSIS
HA200-2	M35104- 001	495 Haley-roof	roof shingle and felt	NO ASBESTOS OBSERVED
HA201-1	M35104- 002	495 Haley-exterior	siding shingle and felt	NO ASBESTOS OBSERVED
HA203-1	M35104- 003a	495 Haley-interior	skimcoat on drywall	4% Chrysotile
HA203-1	M35104- 003b	495 Haley-interior	drywall	NO ASBESTOS OBSERVED

The samples were analyzed in accordance with EPA document 600/R-93/116, "Method for the Determination of Asbestos in Bulk Building Materials". This report relates only to items tested as received, and may not be used to claim endorsement or certification by Materials Analytical Services, the National Voluntary Laboratory Accreditation Program (EPA), or the U.S. Government. This report may not be reproduced except in full without the approval of Materials Analytical Services, Incorporated (NVLAP # 101235).

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35104 - 001	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA200-2
Location	495 Haley-roof				
Type_Mat	roof shingle and felt				

Gross Visual Gray granules in tar with glass fibers, wet brown compressed body of ribbony/woody fibers

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

Fib glass -isotropic	15
Cellulose -rib&woody	40

NON FIBROUS COMPONENTS

Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl# M35104 - 002 **Analyst** Paul Hess **Date** 2/21/2005

ClientName Geo-Hydro Engineers **ClientSpl** HA201-1

Location 495 Haley-exterior

Type_Mat siding shingle and felt

Gross Visual Beige paint on white granules in tar with ribbony/woody fibers, tarry ribbony fiber felt

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile	
Amosite	
Crocidolite	
Tremolite/Actinolite	
Anthophyllite	

OTHER FIBROUS COMPONENTS	
Cellulose -rib&woody	50

NON FIBROUS COMPONENTS	
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35104 - 003a	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA203-1
Location	495 Haley-interior				
Type_Mat	skimcoat on drywall				

Gross Visual Paint on beige fine grained compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology	wavy		
Pleochroism	none		
Refract Index	1.550/1.545		
Sign^	ositive		
Extinction	parallel		
Birefringence	low		
Melt	no		
Fiber Name	Chrysotile		

ASBESTOS MINERALS	**EST. VOL. %**
Chrysotile.....	4
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS

NON FIBROUS COMPONENTS

Opaques	X
Mica	X
Mineral grains	X
Binder	X

Binder Description Bitumen

Comments X = Materials detected.

MATERIALS ANALYTICAL SERVICES, INC.
PLM ANALYSIS

Proj#-Spl#	M35104 - 003b	**Analyst**	Paul Hess	**Date**	2/21/2005
ClientName	Geo-Hydro Engineers			**ClientSpl**	HA203-1
Location	495 Haley-interior				
Type_Mat	drywall				

Gross Visual Tan ribbony fiber remnants on off-white chalky compound

OPTICAL DATA FOR ASBESTOS IDENTIFICATION

Morphology			
Pleochroism			
Refract Index			
Sign^			
Extinction			
Birefringence			
Melt			
Fiber Name			

ASBESTOS MINERALS	**EST. VOL. %**
	NO ASBESTOS OBSERVED
Chrysotile.....	
Amosite.....	
Crocidolite.....	
Tremolite/Actinolite.....	
Anthophyllite.....	

OTHER FIBROUS COMPONENTS	
Cellulose -ribbony	12

NON FIBROUS COMPONENTS	
Mineral grains	X
Binder	X

Binder Description

Comments

PAINT CHIP SAMPLE LABORATORY REPORT

GEO HYDRO ENGINEERS

ESN SOUTHEAST | Environmental Services Network

Case Narrative

Client Information:

Client: **Geo-Hydro Engineers**
1000 Cobb Place Blvd.
Kennesaw, GA 30144
Project Mgr: JFO

Client Project Information:

Project: Fraiser St., Marietta, GA
Project No.: 57929.01
Collected by: JFO

Laboratory Project Information:

Lab Number: 050217-01
Date Collected: 2/16/2005
Date Received: 2/17/2005

Case Summary:

1) Samples were received in good condition and between 0 and 4°C.
2) Samples were analyzed following current EPA Methodologies and the standards of NELAP.
3) No QA/QC problems were encountered during the analysis of the samples.

Data Approved by: Marvin Woods Date: 2/28/2005
Marvin Woods
Laboratory Operations Manager

ESN Southeast is certified/approved to conduct environmental analytical testing in the following states:
California #2121, Florida #990184, Tennessee, Alabama, Georgia.
ESN Southeast adheres to the standards set forth by the National Environmental Laboratory Accreditation Program (NELAP).

3600-C Kennesaw N. Ind. Pkwy. ■ Kennesaw, GA 30144 ■ 770-919-0805 ■ Fax 770-919-0806

ESN SOUTHEAST | Environmental Services Network

CERTIFICATE OF ANALYSIS

Metal Analysis by ICP
EPA Method 6010B

Client Information:

Client:	**Geo-Hydro Engineers** 1000 Cobb Place Blvd. Kennesaw, GA 30144
Project Mgr:	JFO

Laboratory Information:

Lab Number:	050217-01
Date Collected:	2/16/2005
Date Received:	2/17/2005
Date Analyzed:	2/25/2005

Project Information:

Project:	Fraiser St., Marietta, GA
Project No.:	57929.01
Collected by:	JFO

Sample Information:

Sample Matrix:	Paint

SAMPLE ID	LEAD %	PQL* %	Data Qual.
Method Blank	ND	0.005	
LBP-600	0.366	0.005	
LBP-601	0.017	0.005	
LBP-1	3.565	0.005	
LBP-2	0.035	0.005	
LBP-400	2.515	0.005	
LBP-401	0.078	0.005	
LBP-500	ND	0.005	
LBP-501	0.064	0.005	
LBP-300	0.023	0.005	
LBP-201	0.965	0.005	

$$\%lead = \frac{(ppm) \times (50/\text{weight of sample in grams})}{10{,}000}$$

DATA QUALIFIERS:

***PQL** - Practical Quantitation Limit
****Results** listed as **'ND'** were NOT DETECTED at or above the listed PQL.

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ASBESTOS INSPECTOR CERTIFICATION

GEO HYDRO ENGINEERS

The Environmental Institute

John F. O'Brien

Social Security Number - 162-60-2808

Geo-Hydro Engineers Inc. - 1000 Cobb Place Blvd., Suite 290 - Kennesaw, Georgia 30144

Has completed coursework and satisfactorily passed an examination that meets all criteria required for EPA/AHERA/ASHARA (TSCA Title II) Approved Reaccreditation and NESHAP Regulations Training

Asbestos in Buildings: Inspector Refresher

August 17, 2004
Course Date

August 17, 2004
Examination Date

August 16, 2005
Expiration Date

8384
Certificate Number

Thomas G. Laubenthal - Principal Instructor

Rachel G. McCain - Exam Administrator

David W. Hogue - Training Manager

TEI - 1300 Williams Drive, Suite E - Marietta, Georgia 30066 - (770) 427-3600 - www.tei-atl.com