UNITED ANALYTICAL SERVICES, INC.
A Woman Owned Business

1429 Centre Circle Drive
Downers Grove, IL 60515
PHONE: (630) 691-8271
FAX: (630) 691-1819
E-Mail: uasinc@uas1.com

March 22, 2013

Ms. Sarah Hunn, Senior Project Manager
Du Page County Storm Water Management
421 N. County Farm Road
Wheaton, Illinois 60187

UAS Project 13123-01

Re: Asbestos Building Inspection and Analytical Services:
Asbestos Inspection/Testing Services
Single Family Residence - 1408 Burlington Avenue, Lisle, Illinois

Dear Ms. Hunn:

The following will serve as United Analytical Services, Inc. final report for the asbestos building inspection performed at your request at the above referenced location.

Asbestos building inspection services for this project were performed by UAS' inspection team led by Illinois Department of Public Health Licensed Building Inspector Michael Glenn (100-02620). The inspection was commissioned by Mr. Anthony J. Charlton, Director, Du Page County Storm Water Management.

The purpose of the inspection was to collect and analyze information in order to make sound judgements regarding potential asbestos hazards. The inspection was also performed to identify asbestos containing materials prior to building renovation and/or demolition activities. At the client's request, all reasonably accessible, interior suspect asbestos materials were identified during the inspection. These objectives were sought for all reasonably accessible areas of the subject site.

The inspection and analysis was performed as follows:

Asbestos Containing Materials Inspection Methodology

The survey looked for suspect asbestos containing materials through on-site investigation and observation only. It should be noted that a records review, architectural as-built drawings, construction data and current drawings for the facility were not available for purposes of this investigation.

For this investigation the subject building was treated as having a single construction phase. The building was visually inspected for the identification of construction materials, building systems, and homogeneous types of suspect asbestos materials.

1. Bulk Sampling Strategy

   a. A visual inspection was conducted of accessible areas to identify major categories of homogeneous types of suspect materials, where readily accessible and recognizable.

   b. A minimum of three (3) bulk samples of each type of major category of homogeneous material were collected following the EPA Purple Book Protocol, where feasible.

   c. A positive analysis for asbestos on a single sample would define the homogeneous area as an ACM.

2. United Analytical Services, Inc. Standard Operating Procedures

   a. Suspect ACM was not unnecessarily disturbed for sampling.

   b. A NIOSH approved respirator equipped with HEPA filters was worn during bulk sampling of friable materials.

   c. A core was removed by gently cutting and penetrating all layers of the material, including paint and protective coatings.

   d. Each sample was placed in a plastic laboratory bag and labeled with a discrete sample I.D. number.

3. Polarized Light Microscopy (PLM) Bulk Analysis

   Bulk samples were analyzed for asbestos in accordance with the guidelines contained in the EPA Test Method for the determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116, July 1993) and the two most recent Federal Register notices describing the analysis of asbestos in layered building materials and an advisory regarding the availability of an improved asbestos bulk sample test method. These notices include: 1) the 01/05/94, "Asbestos NESHAP Clarification Regarding Analysis of Multi-layered Systems describing the NESHAP policy that layers must be analyzed and reported separately, and 2) the 08/01/94, "Advisory Regarding Availability of an Improved Asbestos Bulk Sample Test Method; Supplementary Information on Bulk Sample Collection and Analysis" announcing the availability of the new bulk sample analysis method for the AHERA program, "Method for the Determination of Asbestos in Bulk Building Materials".

   Note - EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials states that further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.

   The stain dispersion analysis method was used. The percentages of the materials were estimated using both a stereo microscope and a polarized light microscope (PLM). Identifying morphology

include morphology, color and pleochroism, refractive indices, birefringence, extinction characteristics, elongation, and stain dispersion colors.

4. Laboratory Accreditation

The samples were analyzed by UAS, Downers Grove, Illinois. UAS is accredited for PLM analysis by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP).

Inspection Limitations

Our investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing in this or other localities. The information in this report is deemed reliable but there cannot be a guarantee that all hazardous or potentially hazardous conditions have been located or identified. Some of the reasons for this are:

1. The inspection conducted was not an Asbestos Hazard Emergency Response Act (AHERA) inventory. Therefore, all ACMs may not have been identified.

2. When sampling was conducted, it was performed on a random basis and the material sampled was assumed to be homogeneous. The possibility does exist that material composition may differ from the sampling location.

3. Unless specifically noted, our findings and areas we selected to be sampled are based on visual observations. Materials and conditions which are concealed or are inaccessible may not have been discovered.

4. Non-friable suspect ACM have not been sampled unless specifically noted. Examples of non-friable materials include floor tile, transite products, galbestos, roofing materials, mastics and adhesives. While most non-friable materials do not generate fiber release under normal conditions, they cannot be ignored if they are to be altered.

5. When possible, multiple samples should be collected to minimize error. There is a chance that human error will create inconsistencies. If abatement is deemed necessary, a more detailed survey of the homogeneous area is recommended to further define which portions are ACM and to prepare design drawings and bid documents. This could reduce the area that would need to be abated, thus minimizing costs.

6. Some conclusions are in part or whole based on verbal information provided to us by others. False or misleading statements cannot always be detected.

7. Roofs, roof flashings, and exterior materials may have been subject to limited sampling where patching or replacement materials were not deemed adequate to ensure the integrity of the building materials. *The sampling of roof materials was not included within the scope of the current inspection.*

8. This inspection was limited in nature and only those materials identified in the attached building material survey table(s) were identified during the inspection. No inference should be made to any other materials, components or surfaces other than those referenced.

Inspection Summary Information & Findings

A total of nine (9) homogeneous areas of suspect asbestos containing materials/ building systems were identified during the inspection. A detailed listing of the homogeneous areas, materials, and sample analyses data are provided in the attached tables.

The identified suspect materials are noted in the attached Building Materials Survey Table. **Two (2) of the nine (9) suspect asbestos containing systems/building materials identified were identified as being asbestos containing and/or associated with an asbestos containing material (i.e. floor tile mastic), utilizing the standard PLM Method.**

All samples were analyzed according to the EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials. **Further testing by Gravimetric or TEM methods is recommended for samples that are non-friable such as floor tiles, mastics, etc.**

Selective demolition and destructive exploratory measures were performed during the inspection. However, additional sampling may be required if concealed materials or varying materials are revealed during demolition activities.

As long as asbestos containing materials remain intact and the integrity of the materials are not compromised they may be managed in place without representing a hazard to the building or its occupants. Should the need arise to remove or disturb these materials, a licensed asbestos abatement contractor should be employed following all applicable federal, state and local regulations.

It has been a pleasure serving your environmental needs. If you have any questions regarding this report please do not hesitate to call. Thank you.

Sincerely,
United Analytical Services, Inc.

Michael Glenn
IDPH Asbestos Inspector (100-02620)

attachments
td/13.DuPageCo.1408 Burlington Avenue.Lisle.13123-01

United Analytical Services, Inc.

Building Material Survey Table

Client Name: DuPage County, DuPage County Storm Water Management
Building Location: 1408 Burlington Avenue
City: Lisle **State:** IL **Zip:**
Date: March 19, 2013
Turn Around Time: 3-Days
Additional Comments: 2-story, single family residence, wood construction with vinyl/wood siding with basement

UAS #: 13123-01 **UAS SAM#:** S13123-03
Surveyor: Michael Glenn
IDPH #: 100-02620
Page: 1 of 1
Analyze Until Positive: **YES** NO ALL

Sample ID	Material	Location	Asbestos Containing		NESHAP Classification					Hazard Assessment
			Yes	No	Friable	Non Friable Cat 1	Non Friable Cat 2	Quantities	Damage	
SPA-1/3	Plaster	Walls		X			X	~3500sf	2%	NONE
MXA-1/3	Drywall	Walls and Ceilings		X			X	~4500sf	2%	NONE
SCA-1/3	Texture on Ceiling	1st floor southeast bedroom		X			X	~120sf	1%	NONE
*MFA-1/3	White 12"x12" Floor Tile (self-stick over MFB)	Kitchen		X		X		~80sf	1%	NONE
*MFB-1/3	Yellow 12"x12" Floor Tile (self-stick on wood)	Kitchen		X		X		~80sf	1%	NONE
MFC-1/3	**Green Floor Tile and Mastic (under MFD)**	**Hallway, 1st floor**	**X**			**X**		**~20sf**	**<1%**	**NESHAP**
MFD-1/3	**Brown wood pattern 12"x12" Floor Tile**	**1st floor hallway and northeast 1st floor**	**X**			**X**		**~110sf**	**1%**	**NESHAP**
MFE-1/3	Small Pebble pattern Linoleum	Northeast 1st floor		X		X		~90sf	<1%	NONE
MMB-1/3	Tar Paper	Attic Space and under flooring on 1st floor		X		X		~200SF	1%	NONE

ABBREVIATIONS:

ACM: Asbestos Containing Material
NONE: No regulated quantities of asbestos detected, no response required
NESHAP: National Emissions Standard for Hazardous Air Pollutants
OSHA Occupational Safety and Health Administration
AHERA Asbestos Hazard Emergency Response Act

SF: Square Feet
LF: Lineal Feet
CF: Cubic Feet
~: Quantities are approximate
* **Kitchen - Start w/MFB if neg, then MFA stop at first positive.**

Relinquished By: Michael Glenn Date/Time: 3/19/13 at 5:00 p.m.
Received By: Karen Buehler Date/Time: 3/20/13

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
PHONE (630) 691-8271 FAX (630) 691-1819

PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
		DATE RECEIVED:	March 20, 2013
CLIENT:	United Analytical Services	UAS SAM#:	S13123-03
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management 1408 Burlington Ave., Lisle
FAX:	(630)691-1819		

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-03 -01	SPA-1	Grey	Plaster Walls	ND	--	--	--	O	100
S13123-03 -02	SPA-2	Grey	Plaster Walls	ND	--	CELL	10	O	90
S13123-03 -03	SPA-3	Grey	Plaster Walls	ND	--	CELL	Trace	O	100
S13123-03 -04	MXA-1	White	Drywall Walls & Ceilings	ND	--	CELL	15	O	85
S13123-03 -05	MXA-2	White	Drywall Walls & Ceilings	ND	--	CELL	10	O	90
S13123-03 -06	MXA-3	White	Drywall Walls & Ceilings	ND	--	CELL	15	O	85
S13123-03 -07	SCA-1	White	Texture on Ceiling 1st Floor SE Bedroom	ND	--	--	--	O	100
S13123-03 -08	SCA-2	White	Texture on Ceiling 1st Floor SE Bedroom	ND	--	--	--	O	100
S13123-03 -09	SCA-3	White	Texture on Ceiling 1st Floor SE Bedroom	ND	--	--	--	O	100

Analysis Comments:

Samples analyzed according to the EPA/600/r-93 116 July 1993 titled Method for the Determination of Asbestos in Bulk Building Materials
Further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.
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Laboratory results pertain to those delivered for analysis.
Samples will be discarded if not notified by the client within 90 days.

CODES ASBESTOS	CODES OTHER FIBERS	CODES MATRIX
ND-None Detected	FBGL-Fibrous Glass	G-Gypsum
CHRY-Chrysotile	CELL-Cellulose	C-Calcium Carbonate
AMOS-Amosite	SYN-Synthetic	M-Mica
CROC-Crocidolite	WOLL-Wollastonite	O-Other Matrix
TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

PLM & TEM
NVLAP
NVLAP Lab Code 101732

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.

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PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
CLIENT:	United Analytical Services	DATE RECEIVED:	March 20, 2013
ATTENTION:	Thad Daniels	UAS SAM#:	S13123-03
FAX:	(630)691-1819	JOB LOCATION:	DuPage County Storm Water Management 1408 Burlington Ave., Lisle

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-03 -10	MFA-1	White	12x12 Floor Tile (Over MFB) Kitchen	ND	--	CELL	Trace	O	100
S13123-03 -11	MFA-2	White	12x12 Floor Tile (Over MFB) Kitchen	ND	--	--	--	O	100
S13123-03 -12	MFA-3	White	12x12 Floor Tile (Over MFB) Kitchen	ND	--	--	--	O	100
S13123-03 -13	MFB-1	Yellow	12x12 Floor Tile (On Wood) Kitchen	ND	--	--	--	O	100
S13123-03 -14	MFB-2	Yellow	12x12 Floor Tile (On Wood) Kitchen	ND	--	CELL	Trace	O	100
S13123-03 -15	MFB-3	Yellow	12x12 Floor Tile (On Wood) Kitchen	ND	--	--	--	O	100
S13123-03 -16	MFC-1M	Yellow	Mastic Hallway - 1st Floor	ND	--	--	--	O	100
S13123-03 -17	MFC-2M	Yellow	Mastic Hallway - 1st Floor	ND	--	CELL	Trace	O	100
S13123-03 -18	MFC-3M	Yellow	Mastic Hallway - 1st Floor	ND	--	--	--	O	100

Analysis Comments:

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ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP
NVLAP Laboratory # 101732

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CLIENT:	United Analytical Services	UAS SAM#:	S13123-03
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management 1408 Burlington Ave., Lisle
FAX:	(630)691-1819		

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-03 -19	MFC-1	Green	Floor Tile (Under MFD) Hallway - 1st Floor	CHRY	10	--	--	O	90
S13123-03 -22	MFD-1	Brown	12x12 Floor Tile 1st Fl. Hall & NE 1st Fl.	CHRY	8	--	--	O	92
S13123-03 -25	MFE-1	Grey	Linoleum NE 1st Floor	ND	--	CELL	65	O	35
S13123-03 -26	MFE-2	Grey	Linoleum NE 1st Floor	ND	--	CELL	50	O	50
S13123-03 -27	MFE-3	Grey	Linoleum NE 1st Floor	ND	--	CELL	60	O	40
S13123-03 -28	MMB-1	Black	Tar Paper Attic & Under Wood Floor	ND	--	CELL	95	O	5
S13123-03 -29	MMB-2	Black	Tar Paper Attic & Under Wood Floor	ND	--	CELL	90	O	10
S13123-03 -30	MMB-3	Black	Tar Paper Attic & Under Wood Floor	ND	--	CELL	90	O	10

Analysis Comments:

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ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP
NVLAP Laboratory # 101732

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Illinois Department of
PUBLIC HEALTH

Pat Quinn, Governor
LaMar Hasbrouck, MD, MPH, Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

1/24/2013

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133

ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 02620

Enclosed is your Asbestos Professional License that expires 05/15/2014

	CERTIFICATE EXPIRATION DATE
INSPECTOR	1/4/2014
PROJECT DESIGNER	12/11/2013
MANAGEMENT PLANNER	1/4/2014
PROJECT MANAGER	11/30/2013
AIR SAMPLING PROFESSIONAL	

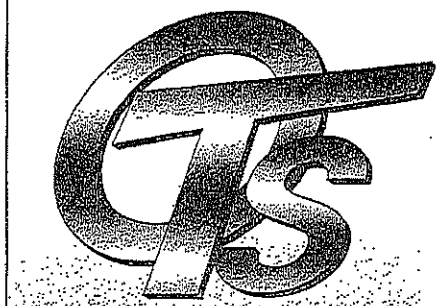
If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.
Our WEB address is http://www.idph.state.il.us/envhealth/ehhome.htm

Illinois Department of PUBLIC HEALTH

ASBESTOS PROFESSIONAL LICENSE

ID NUMBER	ISSUED	EXPIRES
100 - 02620	2/8/2013	05/15/2014

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133
Environmental Health



Occupational Training & Supply, Inc.

7233 Adams Street • Willowbrook, IL 60527 • (630) 655-3900

Asbestos Building Inspector Refresher

Occupational Training and Supply, Inc. certifies that

Michael Glenn

has successfully completed the 4 hour Asbestos Building Inspector Refresher Course and has passed the competency exam with a minimum score of 70%. The course is accredited by the Illinois Department of Public Health and Indiana Department of Environmental Management for purposes of accreditation in accordance with EPA 10 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) and TSCA Title II.

Certificate: BIR1301040040

Exam Date: 1/4/2013

Course Date: 1/4/2013

Expiration Date: 1/4/2014

Kathy DeSalvo

Kathy DeSalvo, Director

2013

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

United Analytical Services, Inc.
1429 Centre Circle Drive
Downers Grove, IL 60515
Dr. Kevin Aikman
Phone: 630-691-8271 Fax: 630-691-1819
E-Mail: kaikman@uas1.com
URL: http://www.uas1.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101732-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology

NVLAP-01S (REV. 2005-05-19)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101732-0

United Analytical Services, Inc.

Downers Grove, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology

NVLAP-01C (REV. 2009-01-28)

UNITED ANALYTICAL SERVICES, INC.
A Woman Owned Business

1429 Centre Circle Drive
Downers Grove, IL 60515
PHONE: (630) 691-8271
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E-Mail: uasinc@uas1.com

March 22, 2013

Ms. Sarah Hunn, Senior Project Manager
Du Page County Storm Water Management
421 N. County Farm Road
Wheaton, Illinois 60187

UAS Project 13123-01

Re: Asbestos Building Inspection and Analytical Services:
Asbestos Inspection/Testing Services
Single Family Residence - 705 E. Parkview Court, Roselle, Illinois

Dear Ms. Hunn:

The following will serve as United Analytical Services, Inc. final report for the asbestos building inspection performed at your request at the above referenced location.

Asbestos building inspection services for this project were performed by UAS' inspection team led by Illinois Department of Public Health Licensed Building Inspector Michael Glenn (100-02620). The inspection was commissioned by Mr. Anthony J. Charlton, Director, Du Page County Storm Water Management.

The purpose of the inspection was to collect and analyze information in order to make sound judgements regarding potential asbestos hazards. The inspection was also performed to identify asbestos containing materials prior to building renovation and/or demolition activities. At the client's request, all reasonably accessible, interior suspect asbestos materials were identified during the inspection. These objectives were sought for all reasonably accessible areas of the subject site.

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The survey looked for suspect asbestos containing materials through on-site investigation and observation only. It should be noted that a records review, architectural as-built drawings, construction data and current drawings for the facility were not available for purposes of this investigation.

For this investigation the subject building was treated as having a single construction phase. The building was visually inspected for the identification of construction materials, building systems, and homogeneous types of suspect asbestos materials.

1. Bulk Sampling Strategy

   a. A visual inspection was conducted of accessible areas to identify major categories of homogeneous types of suspect materials, where readily accessible and recognizable.

   b. A minimum of three (3) bulk samples of each type of major category of homogeneous material were collected following the EPA Purple Book Protocol, where feasible.

   c. A positive analysis for asbestos on a single sample would define the homogeneous area as an ACM.

2. United Analytical Services, Inc. Standard Operating Procedures

   a. Suspect ACM was not unnecessarily disturbed for sampling.

   b. A NIOSH approved respirator equipped with HEPA filters was worn during bulk sampling of friable materials.

   c. A core was removed by gently cutting and penetrating all layers of the material, including paint and protective coatings.

   d. Each sample was placed in a plastic laboratory bag and labeled with a discrete sample I.D. number.

3. Polarized Light Microscopy (PLM) Bulk Analysis

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   Note - EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials states that further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.

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4. Laboratory Accreditation

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Inspection Limitations

Our investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing in this or other localities. The information in this report is deemed reliable but there cannot be a guarantee that all hazardous or potentially hazardous conditions have been located or identified. Some of the reasons for this are:

1. The inspection conducted was not an Asbestos Hazard Emergency Response Act (AHERA) inventory. Therefore, all ACMs may not have been identified.

2. When sampling was conducted, it was performed on a random basis and the material sampled was assumed to be homogeneous. The possibility does exist that material composition may differ from the sampling location.

3. Unless specifically noted, our findings and areas we selected to be sampled are based on visual observations. Materials and conditions which are concealed or are inaccessible may not have been discovered.

4. Non-friable suspect ACM have not been sampled unless specifically noted. Examples of non-friable materials include floor tile, transite products, galbestos, roofing materials, mastics and adhesives. While most non-friable materials do not generate fiber release under normal conditions, they cannot be ignored if they are to be altered.

5. When possible, multiple samples should be collected to minimize error. There is a chance that human error will create inconsistencies. If abatement is deemed necessary, a more detailed survey of the homogeneous area is recommended to further define which portions are ACM and to prepare design drawings and bid documents. This could reduce the area that would need to be abated, thus minimizing costs.

6. Some conclusions are in part or whole based on verbal information provided to us by others. False or misleading statements cannot always be detected.

7. Roofs, roof flashings, and exterior materials may have been subject to limited sampling where patching or replacement materials were not deemed adequate to ensure the integrity of the building materials. *The sampling of roof materials was not included within the scope of the current inspection.*

8. This inspection was limited in nature and only those materials identified in the attached building material survey table(s) were identified during the inspection. No inference should be made to any other materials, components or surfaces other than those referenced.

Inspection Summary Information & Findings

A total of eight (8) homogeneous areas of suspect asbestos containing materials/ building systems were identified during the inspection. A detailed listing of the homogeneous areas, materials, and sample analyses data are provided in the attached tables.

The identified suspect materials are noted in the attached Building Materials Survey Table. **Two (2) of the eight (8) suspect asbestos containing systems/building materials identified were identified as being asbestos containing and/or associated with an asbestos containing material (i.e. floor tile mastic), utilizing the standard PLM Method.**

All samples were analyzed according to the EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials. **Further testing by Gravimetric or TEM methods is recommended for samples that are non-friable such as floor tiles, mastics, etc.**

One (1) material, residual mastic under carpet squares, located in the basement was noted as containing less than one percent (<1%) asbestos. ***While this material is not considered a regulated asbestos containing material (RACM) per the EPA's definition, and if a contractor is hired by the client/owner, removal of this material must be conducted by properly trained and accredited workers in accordance with federal OSHA standards. Attached is a guidance document from the U.S. Department of Labor/OSHA for your reference.***

Selective demolition and destructive exploratory measures were performed during the inspection. However, additional sampling may be required if concealed materials or varying materials are revealed during demolition activities.

As long as asbestos containing materials remain intact and the integrity of the materials are not compromised they may be managed in place without representing a hazard to the building or its occupants. Should the need arise to remove or disturb these materials, a licensed asbestos abatement contractor should be employed following all applicable federal, state and local regulations.

It has been a pleasure serving your environmental needs. If you have any questions regarding this report please do not hesitate to call. Thank you.

Sincerely,
United Analytical Services, Inc.

Michael Glenn
IDPH Asbestos Inspector (100-02620)

attachments
td/13.DuPageCo.705 E. Parkview Court.Roselle.13123-01

United Analytical Services, Inc.

Building Material Survey Table

Client Name: DuPage County, DuPage County Storm Water Management
UAS #: 13123-01 **UAS SAM#:** S13123-02
Building Location: 705 East Parkview Court
Surveyor: Michael Glenn
City: Roselle **State:** IL **Zip:**
IDPH #: 100-02620
Date: March 19, 2013
Page: 1 of 1
Turn Around Time: 3-Days
Analyze Until Positive: YES NO ALL
Additional Comments: Brich and Wood Siding, 1 story single family residence with basement and attached garage

Sample ID	Material	Location	Asbestos Containing		NESHAP Classification					Hazard Assessment
			Yes	No	Friable	Non Friable		Quantities	Damage	
						Cat 1	Cat 2			
SCA-1/3	Texture on Ceiling	1st Floor ceilings		X			X	~1870sf	2%	NONE
MXA-1/3	Drywall	Walls and Ceilings		X			X	~2640sf	5%	NONE
*MFA-1/3	12"x12" Floor Tile (over plywood/MFB/MFC)	Kitchen		X		X		~120sf	2%	NONE
*MFB-1/3	Yellow 12"x12" Floor Tile	Kitchen		X		X		~120sf	2%	NONE
*MFC-1/3	White Linoleum	Kitchen		X		X		~120sf	2%	NONE
**MFD-1/3	**Residual mastic (black & Yellow)**	**Basement under carpet squares**	**X**			**X**		**~330sf**	**1%**	**OSHA**
MFE-1/3	**Stone pattern Linoleum**	**1st floor Living Room Under Carpet**	**X**			**X**		**~240sf**	**1%**	**NESHAP**
MFF-1/3	Grey 12"x12" Floor Tile	Basement Laundry/Utility Room		X		X		~100sf	2%	NONE

ABBREVIATIONS:

ACM: Asbestos Containing Material
NONE: No regulated quantities of asbestos detected, no response required
NESHAP: National Emissions Standard for Hazardous Air Pollutants
OSHA Occupational Safety and Health Administration
AHERA Asbestos Hazard Emergency Response Act

SF: Square Feet
LF: Lineal Feet
CF: Cubic Feet
~: Quantities are approximate
* **Start w/MFC, then if neg. MFB, then if neg. MFA stopping at first positive**
** **Asbestos detected less than 1%, not RACM**

Relinquished By: Michael Glenn Date/Time: 3/19/13 at 5:00 p.m.
Received By: Karen Buehler Date/Time: 3/20/13

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
PHONE (630) 691-8271 FAX (630) 691-1819

PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
		DATE RECEIVED:	March 20, 2013
CLIENT:	United Analytical Services	UAS SAM#:	S13123-02
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management 705 E. Parkview Ct., Roselle
FAX:	(630)691-1819		

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-02 -01	SCA-1	White	Texture on Ceiling 1st Floor	ND	--	--	--	O	100
S13123-02 -02	SCA-2	White	Texture on Ceiling 1st Floor	ND	--	--	--	O	100
S13123-02 -03	SCA-3	White	Texture on Ceiling 1st Floor	ND	--	CELL	Trace	O	100
S13123-02 -04	MXA-1	White	Drywall Walls & Ceilings	ND	--	CELL	10	O	90
S13123-02 -05	MXA-2	White	Drywall Walls & Ceilings	ND	--	CELL	15	O	85
S13123-02 -06	MXA-3	White	Drywall Walls & Ceilings	ND	--	CELL	15	O	85
S13123-02 -07	MFA-1	Grey	12x12 Floor Tile (Over Plywood/MFB/MFC) Kitchen	ND	--	CELL	40	O	60
S13123-02 -08	MFA-2	Grey	12x12 Floor Tile (Over Plywood/MFB/MFC) Kitchen	ND	--	CELL	45	O	55
S13123-02 -09	MFA-3	Grey	12x12 Floor Tile (Over Plywood/MFB/MFC) Kitchen	ND	--	CELL	40	O	60

Analysis Comments:

Samples analyzed according to the EPA/600/r-93 116 July 1993 titled Method for the Determination of Asbestos in Bulk Building Materials
Further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.
Report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory results pertain to those delivered for analysis.
Samples will be discarded if not notified by the client within 90 days.

CODES ASBESTOS	CODES OTHER FIBERS	CODES MATRIX
ND-None Detected	FBGL-Fibrous Glass	G-Gypsum
CHRY-Chrysotile	CELL-Cellulose	C-Calcium Carbonate
AMOS-Amosite	SYN-Synthetic	M-Mica
CROC-Crocidolite	WOLL-Wollastonite	O-Other Matrix
TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

Karen Buehler

ANALYZED BY - Karen Buehler / Laboratory Manager

March 20, 2013
DATE ANALYZED

PLM & TEM
NVLAP
NVLAP Lab Code 101732

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
PHONE (630) 691-8271 FAX (630) 691-1819

PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
		DATE RECEIVED:	March 20, 2013
CLIENT:	United Analytical Services	UAS SAM#:	S13123-02
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management 705 E. Parkview Ct., Roselle
FAX:	(630)691-1819		

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-02 -10	MFB-1	Yellow	12x12 Floor Tile Kitchen	ND	--	--	--	O	100
S13123-02 -11	MFB-2	Yellow	12x12 Floor Tile Kitchen	ND	--	--	--	O	100
S13123-02 -12	MFB-3	Yellow	12x12 Floor Tile Kitchen	ND	--	--	--	O	100
S13123-02 -13	MFC-1	White	Linoleum Kitchen	ND	--	CELL	35	O	65
S13123-02 -14	MFC-2	White	Linoleum Kitchen	ND	--	CELL	40	O	60
S13123-02 -15	MFC-3	White	Linoleum Kitchen	ND	--	CELL	30	O	70
S13123-02 -16	MFD-1	Black & Yellow	Residual Mastic Bsmt. Under Carpet Squares	CHRY	<1	CELL	Trace	O	99
S13123-02 -17	MFD-2	Black & Yellow	Residual Mastic Bsmt. Under Carpet Squares	CHRY	Trace	CELL	Trace	O	100
S13123-02 -18	MFD-3	Black & Yellow	Residual Mastic Bsmt. Under Carpet Squares	CHRY	<1	CELL	1	O	98

Analysis Comments:

Samples analyzed according to the EPA/600/r-93 116 July 1993 titled Method for the Determination of Asbestos in Bulk Building Materials
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TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP
NVLAP Laboratory # 101732

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
PHONE (630) 691-8271 FAX (630) 691-1819

PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
CLIENT:	United Analytical Services	DATE RECEIVED:	March 20, 2013
ATTENTION:	Thad Daniels	UAS SAM#:	S13123-02
FAX:	(630)691-1819	JOB LOCATION:	DuPage County Storm Water Management 705 E. Parkview Ct., Roselle

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-02 -19	MFE-1	Grey	Linoleum 1st Fl. Living Room Under Carpet	CHRY	40	CELL	Trace	O	60
S13123-02 -22	MFF-1	Grey	12x12 Floor Tile Bsmt. Laundry/Utility Room	ND	--	--	--	O	100
S13123-02 -23	MFF-2	Grey	12x12 Floor Tile Bsmt. Laundry/Utility Room	ND	--	--	--	O	100
S13123-02 -24	MFF-3	Grey	12x12 Floor Tile Bsmt. Laundry/Utility Room	ND	--	--	--	O	100

Analysis Comments:

Samples analyzed according to the EPA/600/r-93 116 July 1993 titled Method for the Determination of Asbestos in Bulk Building Materials
Further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.
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TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP®
NVLAP Laboratory # 101732

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.

Illinois Department of
PUBLIC HEALTH

Pat Quinn, Governor
LaMar Hasbrouck, MD, MPH, Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

1/24/2013

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133

ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 02620

Enclosed is your Asbestos Professional License that expires 05/15/2014

	CERTIFICATE EXPIRATION DATE
INSPECTOR	1/4/2014
PROJECT DESIGNER	12/11/2013
MANAGEMENT PLANNER	1/4/2014
PROJECT MANAGER	11/30/2013
AIR SAMPLING PROFESSIONAL	

If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.
Our WEB address is http://www.idph.state.il.us/envhealth/ehhome.htm

Illinois Department of
PUBLIC HEALTH

ASBESTOS PROFESSIONAL LICENSE

ID NUMBER	ISSUED	EXPIRES
100 - 02620	2/8/2013	05/15/2014

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133
Environmental Health

Occupational Training & Supply, Inc.

7233 Adams Street • Willowbrook, IL 60527 • (630) 655-3900

Asbestos Building Inspector Refresher

Occupational Training and Supply, Inc. certifies that

Michael Glenn

has successfully completed the 4 hour Asbestos Building Inspector Refresher Course and has passed the competency exam with a minimum score of 70%. The course is accredited by the Illinois Department of Public Health and Indiana Department of Environmental Management for purposes of accreditation in accordance with EPA 10 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) and TSCA Title II.

Certificate: BIR1301040040

Exam Date: 1/4/2013

Course Date: 1/4/2013

Expiration Date: 1/4/2014

Kathy DeSalvo

Kathy DeSalvo, Director

2013

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

United Analytical Services, Inc.
1429 Centre Circle Drive
Downers Grove, IL 60515
Dr. Kevin Aikman
Phone: 630-691-8271 Fax: 630-691-1819
E-Mail: kaikman@uas1.com
URL: http://www.uas1.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101732-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2012-07-01 through 2013-06-30
Effective dates

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101732-0

United Analytical Services, Inc.

Downers Grove, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology

Standard Interpretations

11/24/2003 - Compliance requirements for renovation work involving material containing less than 1% asbestos.

United Analytical Services, Inc.
1429 Centre Circle Drive
Downers Grove, IL 60515

Standard Interpretations - Table of Contents

- **Standard Number:** 1926.1101; 1926.1101(e); 1926.1101(f)(2); 1926.1101(f)(5); 1926.1101(f)(6); 1926.1101(g)(1); 1926.1101(g)(3); 1926.1101(g)(8)(ii); 1926.1101(k); 1926.1101(k)(7); 1926.1101(k)(8); 1926.1101(l)(1); 1926.1101(n)(2)

November 24, 2003

Kurt Varga, Ph.D.
The InService Training Network
6813 Flags Center Drive
Columbus, OH 43229

Dear Dr. Varga:

Thank you for your April 18, 2002 letter to the Occupational Safety and Health Administration (OSHA). Your letter was forwarded to the Directorate of Enforcement Programs for a response. You are writing on behalf of the Ohio School Facilities Commission, which deals with the construction of schools in Ohio. As a preliminary matter, it should be noted that the Commission, as an agency of a state, and the public schools, as entities of political subdivisions of a state, are not subject to the Occupational Safety and Health Act of 1970. See 29 U.S.C. Sec. 652(b)(5). However, in light of your concerns about the costs imposed on school building contractors of complying with the asbestos standard, we are answering your questions. You have questions concerning the OSHA requirements covering the renovation of school buildings that have hard plaster containing some asbestos, but the amount is not more than 1%. This letter constitutes OSHA's interpretation only of the requirements discussed and may not be applicable to any question not delineated within your original correspondence. We apologize for the long delay of this response; our replies to your paraphrased questions are provided below.

Question 1: Are the OSHA letters dated April 17, 1997; August 7, 1998; and August 13, 1999 correct? They all say that items that do not contain >1% asbestos are covered to at least some extent by the Construction Asbestos Standard.

Reply: Yes, those letters are correct although some requirements of the Construction Asbestos Standard, 29 CFR 1926.1101 were not addressed. 29 CFR 1926.1101 would apply even if neither asbestos permissible exposure limit (PEL) is exceeded[1]. The standard contains numerous work practice requirements and prohibitions which apply, regardless of the exposure levels. However, only two of the requirements and three of the prohibitions must be observed in the case of work activities involving installed construction materials that do not contain >1% asbestos. Those work practice requirements and prohibitions that must be observed regardless of the exposure levels and of the percentage of asbestos in the installed construction materials are:

- 29 CFR 1926.1101(g)(1)(ii), which requires: **wet methods, or wetting agents, to control employee exposures during asbestos handling, mixing, removal, cutting, application, and cleanup, except where employers demonstrate that**

the use of wet methods is infeasible due to, for example, the creation of electrical hazards, equipment malfunction, and, in roofing, except as provided in paragraph (g)(8)(ii)[2] of this section;

- 29 CFR 1926.1101(g)(1)(iii), which requires: **prompt clean-up and disposal of wastes and debris contaminated with asbestos in leak-tight containers except in roofing operations, where the procedures specified in paragraph (g)(8)(ii)[3] of this section apply;**
- 29 CFR 1926.1101(g)(3)(i), which prohibits: **high-speed abrasive disc saws that are not equipped with point-of-cut ventilator or enclosures with HEPA filtered exhaust air;**
- 29 CFR 1926.1101(g)(3)(ii), which prohibits: **compressed air used to remove asbestos, or materials containing asbestos, unless the compressed air is used in conjunction with an enclosed ventilation system designed to capture the dust cloud created by the compressed air;** and
- 29 CFR 1926.1101(g)(3)(iv), which prohibits: **employee rotation as a means of reducing employee exposure to asbestos.**

There are also some other provisions that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos. However, if neither asbestos PEL is exceeded, only the following few provisions apply:

- 29 CFR 1926.1101(f)(2)(i), the provision for establishing that neither asbestos PEL is exceeded: **Each employer who has a workplace or work operation covered by this standard shall ensure that a "competent person" conducts an exposure assessment immediately before or at the initiation of the operation to ascertain expected exposures during that operation or workplace. The assessment must be completed in time to comply with requirements which are triggered by exposure data or the lack of a "negative exposure assessment," and to provide information necessary to assure that all control systems planned are appropriate for that operation and will work properly;**
- 29 CFR 1926.1101(f)(6)(i), a provision covering the observation of monitoring: **The employer shall provide affected employees and their designated representatives an opportunity to observe any monitoring of employee exposure to asbestos conducted in accordance with this section;**
- 29 CFR 1926.1101(f)(5)(i), a provision covering employee notification of monitoring results: **The employer shall notify affected employees of the monitoring results that represent that employee's exposure as soon as possible following receipt of monitoring results;**
- 29 CFR 1926.1101(f)(5)(ii), another provision covering employee notification of monitoring results: **The employer shall notify affected employees of the results of monitoring representing the employee's exposure in writing either individually or by posting at a centrally located place that is accessible to affected employees;** and
- 29 CFR 1926.1101(n)(2)(i)-(iii), a set of provisions covering recordkeeping for measurements of exposures to airborne asbestos.

There are numerous additional provisions of the standard that apply to work activities involving installed construction materials even where the material does not contain >1% asbestos if at least one of the asbestos PELs is exceeded.

Question 2: Did OSHA intend to regulate material that is found to contain asbestos at <1% when it promulgated the Construction Asbestos Standard that it issued in 1994?

Reply: Yes. Instead of making all of the engineering controls and work practices applicable to all materials containing asbestos, OSHA made most of them applicable only to installed building materials that contain >1% asbestos and assigned the term "asbestos-containing material" (ACM) to those materials. However, to prevent needless worker exposures to asbestos, OSHA made a few common-sense work practices and prohibitions applicable if any asbestos is present in materials.

Thus, the current standard contains engineering controls and work practices that apply

regardless of the exposure levels to certain work activities involving only installed building materials that meet the definition of ACM. It also contains a few work practices and prohibitions for work involving material that contains any amount of asbestos regardless of the exposure levels. And the standard has exposure-based requirements, consisting of a 0.1 fiber/cc 8-hour TWA PEL and a 1 fiber/cc 30-minute excursion limit, and other requirements that apply whenever worker exposures exceed either or both of the limits, regardless of the amount of asbestos contained in the materials involved.

Question 3: If OSHA had intended to regulate material with <1% asbestos, why aren't we required to communicate information about material with <1% asbestos?

Reply: Most of the requirements for communication of information occur under 29 CFR 1910.1101(k), *Communication of Hazards.* Any of the requirements which apply only to building or facility owners are inapplicable because the buildings are entities of political subdivisions of the State of Ohio and not subject to the OSHAct. On the other hand, any of the provisions that apply to employers are applicable to private contractors doing the asbestos work. The information that sections (k)(7), (9), and (10) require to be communicated applies to materials not having >1% asbestos which are the source of employee asbestos exposures exceeding one or both of the asbestos PELs as well as to materials containing >1% asbestos. Also, 29 CFR 1926.1101(k)(8), which specifies labeling requirements, applies to materials that contain 1% or more asbestos. On the other hand, it is correct that the information which (k)(1)-(k)(6) require to be communicated pertains only to materials containing >1% asbestos. However, it should be noted that under (k), surfacing material, thermal system insulation and asphalt and vinyl flooring material found in buildings constructed no later than 1980 or installed no later than 1980 must be considered to contain >1% asbestos, unless the employer demonstrates otherwise in accordance with (k)(5).

Question 4: Under 29 CFR 1926.1101(k)(8) are employers required only to communicate information about ACM?

Reply: 29 CFR 1926.1101(k)(8) requires employers to communicate information about ACM and also material that contains 1% asbestos. (ACM, again, is material that contains >1% asbestos.)

Question 5: Should the phrase "products containing asbestos" as used in paragraph (k)(8)(i) be read "ACM" and not as including materials with <1% asbestos, because otherwise there is a contradiction in (k)(8)?

Reply: No. There is no contradiction. Paragraph (k)(8)(i) deals broadly with products containing asbestos. Paragraph (k)(8)(vi)(B) provides for an exclusion from labeling for products with <1% concentrations of asbestos.

Question 6: Why, if material containing <1% asbestos is to be considered hazardous (employers are to wet it, put it in containers, and perform air monitoring), are employers not required to warn workers about its presence when they know it is present at a work site or in a building?

Reply: You **must** inform employees about the presence of material containing <1% asbestos when you know it is present. When employees perform work activities involving such material, you are required per 29 CFR 1926.1101(f)(2)(i) to assess their exposures to asbestos. In connection with this requirement you must, per 29 CFR 1926.1101(f)(6)(i), provide affected employees an opportunity to observe any monitoring of asbestos exposure. After the monitoring, you must, per 29 CFR 1926.1101(f)(5)(i) and (ii), inform employees of the monitoring results representing their asbestos exposures. In accordance with 29 CFR 1926.1101(e) and (k)(7), if asbestos exposures exceed or are likely to exceed one or both of the PELs, then you must provide warning by posting the area where these overexposures are occurring as a regulated area.

Although employers do not **have to** label containers of waste and debris containing <1% asbestos, promptly placing the waste and debris in leak-tight containers is a work practice that reduces the exposures of the employees producing the waste and debris. That is

especially so because this work practice is to be used in conjunction with wet methods or wetting agents. By promptly cleaning up the waste and debris and placing it in containers, it is kept from drying out and possibly releasing airborne asbestos into the work environment. Leak-tight containers prevent the asbestos from seeping out and reintroducing an asbestos exposure hazard.

Question 7: If OSHA had intended to regulate material containing <1% asbestos, why do not employers have to use HEPA-filters when using vacuum cleaners to clean up material containing <1% asbestos?

Reply: An employer does not have to use vacuum cleaners to clean up material containing <1% asbestos. However, if an employer uses vacuum cleaners to clean up the material, then per 29 CFR 1926.1101(l)(1), it must use HEPA-filtered vacuuming equipment.

Question 8: If OSHA had intended to regulate material containing <1% asbestos, why does it not discuss the distinction between ACM and material containing <1% asbestos in the preamble to the regulation?

Reply: OSHA was already regulating materials that contained <1% asbestos. In promulgating the 1994 standard, OSHA was determining which materials to regulate further by additional work practice and engineering control requirements.

Question 9: If OSHA had intended to regulate material containing <1% asbestos, why did it not examine the compliance costs for working with this material?

Reply: As we stated above, OSHA was already regulating materials with <1% asbestos. In promulgating the 1994 standard, OSHA was determining the cost of complying with additional work practice and engineering control requirements.

Question 10: If OSHA had intended to regulate material containing <1% asbestos, why did it not mention this in its CPLs dealing with asbestos in construction?

Reply: That was simply an oversight by the preparers of the Asbestos Compliance Directive. It will be corrected when the directive is next updated.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statute, standards, and regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretation of the requirements discussed. Note that our enforcement guidance may be affected by changes to OSHA rules. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at http://www.osha.gov. If you have any further questions, please feel free to contact the Office of Health Enforcement at (202) 693-2190.

Sincerely,

Richard E. Fairfax, Director
Directorate of Enforcement Programs

---

[1] The asbestos PELs are an eight-(8-) hour time-weighted average (TWA) limit of 0.1 fiber per cubic centimeter of air (0.1 f/cc) and an excursion limit of 1.0 f/cc as averaged over a sampling period of thirty (30) minutes. [back to text]

---

[2] Paragraph (g)(8)(ii)is directed toward the removal of roofing materials containing >1% asbestos. However, OSHA interprets the reference at (g)(8)(ii)(B) to the exception to the use of wet methods for reasons of infeasibility or the creation of safety hazards as also

applying to removing any roofing materials that do not contain >1% asbestos. [back to text]

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[3] The reference to paragraph (g)(8)(ii) applies even for material that does not contain >1% asbestos. [back to text]

---

[4] The phrase, *Installed Asbestos Containing Building Material*, is intended to be the heading and the start of 29 CFR 1926.1101(k)(1). The three sentences preceding that phrase are intended to be an introduction for 29 CFR 1926.1101(k) and precede (k)(1). [back to text]

Standard Interpretations - Table of Contents

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Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210

United Analytical Services, Inc.
1429 Centre Circle Drive
Downers Grove, IL 60515

UNITED ANALYTICAL SERVICES, INC.
A Woman Owned Business

1429 Centre Circle Drive
Downers Grove, IL 60515
PHONE: (630) 691-8271
FAX: (630) 691-1819
E-Mail: uasinc@uas1.com

March 22, 2013

Ms. Sarah Hunn, Senior Project Manager
Du Page County Storm Water Management
421 N. County Farm Road
Wheaton, Illinois 60187

UAS Project 13123-01

Re: Asbestos Building Inspection and Analytical Services:
Asbestos Inspection/Testing Services
Single Family Residence - 4N 064 Arthur Street, Addison, Illinois

Dear Ms. Hunn:

The following will serve as United Analytical Services, Inc. final report for the asbestos building inspection performed at your request at the above referenced location.

Asbestos building inspection services for this project were performed by UAS' inspection team led by Illinois Department of Public Health Licensed Building Inspector Michael Glenn (100-02620). The inspection was commissioned by Mr. Anthony J. Charlton, Director, Du Page County Storm Water Management.

The purpose of the inspection was to collect and analyze information in order to make sound judgements regarding potential asbestos hazards. The inspection was also performed to identify asbestos containing materials prior to building renovation and/or demolition activities. At the client's request, all reasonably accessible, interior suspect asbestos materials were identified during the inspection. These objectives were sought for all reasonably accessible areas of the subject site.

The inspection and analysis was performed as follows:

Asbestos Containing Materials Inspection Methodology
The survey looked for suspect asbestos containing materials through on-site investigation and observation only. It should be noted that a records review, architectural as-built drawings, construction data and current drawings for the facility were not available for purposes of this investigation.

For this investigation the subject building was treated as having a single construction phase. The building was visually inspected for the identification of construction materials, building systems, and homogeneous types of suspect asbestos materials.

1. Bulk Sampling Strategy

   a. A visual inspection was conducted of accessible areas to identify major categories of homogeneous types of suspect materials, where readily accessible and recognizable.

   b. A minimum of three (3) bulk samples of each type of major category of homogeneous material were collected following the EPA Purple Book Protocol, where feasible.

   c. A positive analysis for asbestos on a single sample would define the homogeneous area as an ACM.

2. United Analytical Services, Inc. Standard Operating Procedures

   a. Suspect ACM was not unnecessarily disturbed for sampling.

   b. A NIOSH approved respirator equipped with HEPA filters was worn during bulk sampling of friable materials.

   c. A core was removed by gently cutting and penetrating all layers of the material, including paint and protective coatings.

   d. Each sample was placed in a plastic laboratory bag and labeled with a discrete sample I.D. number.

3. Polarized Light Microscopy (PLM) Bulk Analysis

   Bulk samples were analyzed for asbestos in accordance with the guidelines contained in the EPA Test Method for the determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116, July 1993) and the two most recent Federal Register notices describing the analysis of asbestos in layered building materials and an advisory regarding the availability of an improved asbestos bulk sample test method. These notices include: 1) the 01/05/94, "Asbestos NESHAP Clarification Regarding Analysis of Multi-layered Systems describing the NESHAP policy that layers must be analyzed and reported separately, and 2) the 08/01/94, "Advisory Regarding Availability of an Improved Asbestos Bulk Sample Test Method; Supplementary Information on Bulk Sample Collection and Analysis" announcing the availability of the new bulk sample analysis method for the AHERA program, "Method for the Determination of Asbestos in Bulk Building Materials".

   Note - EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials states that further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.

   The stain dispersion analysis method was used. The percentages of the materials were estimated using both a stereo microscope and a polarized light microscope (PLM). Identifying morphology

include morphology, color and pleochroism, refractive indices, birefringence, extinction characteristics, elongation, and stain dispersion colors.

4. Laboratory Accreditation

The samples were analyzed by UAS, Downers Grove, Illinois. UAS is accredited for PLM analysis by the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP).

Inspection Limitations

Our investigation was performed using the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental consultants practicing in this or other localities. The information in this report is deemed reliable but there cannot be a guarantee that all hazardous or potentially hazardous conditions have been located or identified. Some of the reasons for this are:

1. The inspection conducted was not an Asbestos Hazard Emergency Response Act (AHERA) inventory. Therefore, all ACMs may not have been identified.

2. When sampling was conducted, it was performed on a random basis and the material sampled was assumed to be homogeneous. The possibility does exist that material composition may differ from the sampling location.

3. Unless specifically noted, our findings and areas we selected to be sampled are based on visual observations. Materials and conditions which are concealed or are inaccessible may not have been discovered.

4. Non-friable suspect ACM have not been sampled unless specifically noted. Examples of non-friable materials include floor tile, transite products, galbestos, roofing materials, mastics and adhesives. While most non-friable materials do not generate fiber release under normal conditions, they cannot be ignored if they are to be altered.

5. When possible, multiple samples should be collected to minimize error. There is a chance that human error will create inconsistencies. If abatement is deemed necessary, a more detailed survey of the homogeneous area is recommended to further define which portions are ACM and to prepare design drawings and bid documents. This could reduce the area that would need to be abated, thus minimizing costs.

6. Some conclusions are in part or whole based on verbal information provided to us by others. False or misleading statements cannot always be detected.

7. Roofs, roof flashings, and exterior materials may have been subject to limited sampling where patching or replacement materials were not deemed adequate to ensure the integrity of the building materials. *The sampling of roof materials was not included within the scope of the current inspection.*

8. This inspection was limited in nature and only those materials identified in the attached building material survey table(s) were identified during the inspection. No inference should be made to any other materials, components or surfaces other than those referenced.

Inspection Summary Information & Findings

A total of seven (7) homogeneous areas of suspect asbestos containing materials/ building systems were identified during the inspection. A detailed listing of the homogeneous areas, materials, and sample analyses data are provided in the attached tables.

The identified suspect materials are noted in the attached Building Materials Survey Table. **None of the seven (7) suspect materials were identified as being asbestos containing and/or associated with an asbestos containing material, utilizing the standard PLM Method.**

All samples were analyzed according to the EPA/600/r-93 116 July 1993 titled Method for Determination of Asbestos in Bulk Building Materials. **Further testing by Gravimetric or TEM methods is recommended for samples that are non-friable such as floor tiles, mastics, etc.**

Selective demolition and destructive exploratory measures were performed during the inspection. However, additional sampling may be required if concealed materials or varying materials are revealed during demolition activities.

As long as asbestos containing materials remain intact and the integrity of the materials are not compromised they may be managed in place without representing a hazard to the building or its occupants. Should the need arise to remove or disturb these materials, a licensed asbestos abatement contractor should be employed following all applicable federal, state and local regulations.

It has been a pleasure serving your environmental needs. If you have any questions regarding this report please do not hesitate to call. Thank you.

Sincerely,
United Analytical Services, Inc.

Michael Glenn
IDPH Asbestos Inspector (100-02620)

attachments
td/13.DuPageCo.4N 064 Arthur Street.Addison.13123-01

United Analytical Services, Inc.

Building Material Survey Table

Client Name: DuPage County, DuPage County Storm Water Management
Building Location: 4N 064 Arthur Street
City: Addison **State:** IL **Zip:**
Date: March 19, 2013
Turn Around Time: 3-Days
Additional Comments: Brick, single story, single family residence with basement and attached garage

UAS #: 13123-01 **UAS SAM#:** S13123-01
Surveyor: Michael Glenn
IDPH #: 100-02620
Page: 1 of 1
Analyze Until Positive: YES NO ALL

Sample ID	Material	Location	Asbestos Containing		NESHAP Classification					Hazard Assessment
			Yes	No	Friable	Non Friable Cat 1	Non Friable Cat 2	Quantities	Damage	
MXA-1/3	Drywall	Throughout		X			X	~4080sf	2%	NONE
*MFA-1/3	Vinyl wood pattern purgo tile floor (over MFB/MFC)	Basement		X		X		~650sf	5%	NONE
*MFB-1/3	Vinyl grey tile floor (under MFA)	Basement		X		X		~650sf	5%	NONE
*MFC-1/3	Residual floor mastic (black and yellow)	Basement		X		X		~650sf	1%	NONE
MMA-1/3	Blown-in Insulation	Attic		X	X			~1020sf	1%	NONE
MMB-1/3	Ceramic Tile Mastic	Kitchen walls		X		X		~25sf	2%	NONE
MMC-1/3	Ceramic Tile Mastic	Basement lower walls		X		X		~340sf	2%	NONE

ABBREVIATIONS:

ACM: Asbestos Containing Material
NONE: No regulated quantities of asbestos detected, no response required
NESHAP: National Emissions Standard for Hazardous Air Pollutants
OSHA Occupational Safety and Health Administration
AHERA Asbestos Hazard Emergency Response Act

SF: Square Feet
LF: Lineal Feet
CF: Cubic Feet
~: Quantities are approximate
* **Basement - Start w/MFC, if neg. then MFB, if neg. then MFA. Stop at first positive.**

Relinquished By: Michael Glenn Date/Time: 3/19/13 at 5:00 p.m. Received By: Karen Buehler Date/Time: 3/20/13

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
PHONE (630) 691-8271 FAX (630) 691-1819

PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
		DATE RECEIVED:	March 20, 2013
CLIENT:	United Analytical Services	UAS SAM#:	S13123-01
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management
FAX:	(630)691-1819		4N 064 Arthur St., Addison

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-01 -01	MXA-1	White	Drywall Throughout	ND	--	CELL	5	O	95
S13123-01 -02	MXA-2	White	Drywall Throughout	ND	--	CELL	10	O	90
S13123-01 -03	MXA-3	White	Drywall Throughout	ND	--	CELL FBGL	2 Trace	O	98
S13123-01 -04	MFA-1	Wood-like	Vinyl Pergo Tile (Over MFB/MFC) Basement	ND	--	FBGL	8	O	92
S13123-01 -05	MFA-2	Wood-like	Vinyl Pergo Tile (Over MFB/MFC) Basement	ND	--	FBGL CELL	5 Trace	O	95
S13123-01 -06	MFA-3	Wood-like	Vinyl Pergo Tile (Over MFB/MFC) Basement	ND	--	CELL	<1	O	99
S13123-01 -07	MFB-1	Grey	Vinyl Tile (Under MFA) Basement	ND	--	SYNTH	5	O	95
S13123-01 -08	MFB-2	Grey	Vinyl Tile (Under MFA) Basement	ND	--	SYNTH	2	O	98
S13123-01 -09	MFB-3	Grey	Vinyl Tile (Under MFA) Basement	ND	--	SYNTH	3	O	97

Analysis Comments:

Samples analyzed according to the EPA/600/r-93 116 July 1993 titled Method for the Determination of Asbestos in Bulk Building Materials
Further testing by Gravimetric or TEM methods are recommended for samples that are non-friable such as floor tiles, mastics, etc.
Report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory results pertain to those delivered for analysis.
Samples will be discarded if not notified by the client within 90 days.

CODES ASBESTOS	CODES OTHER FIBERS	CODES MATRIX
ND-None Detected	FBGL-Fibrous Glass	G-Gypsum
CHRY-Chrysotile	CELL-Cellulose	C-Calcium Carbonate
AMOS-Amosite	SYN-Synthetic	M-Mica
CROC-Crocidolite	WOLL-Wollastonite	O-Other Matrix
TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

Karen Buehler

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

PLM & TEM
NVLAP®
NVLAP Lab Code 101732

This report must not be used by the client to claim product endorsement by NVLAP or any agency of the United States Government.

UNITED ANALYTICAL SERVICES, INC.
1429 CENTRE CIRCLE DRIVE, DOWNERS GROVE, IL 60515
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PLM LABORATORY REPORT

METHOD:	EPA/600/R-93/116 July 1993 PLM w/ Dispersion Staining	REPORT DATE:	March 21, 2013
CLIENT:	United Analytical Services	DATE RECEIVED:	March 20, 2013
ATTENTION:	Thad Daniels	UAS SAM#:	S13123-01
FAX:	(630)691-1819	JOB LOCATION:	DuPage County Storm Water Management 4N 064 Arthur St., Addison

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-01 -10	MFC-1	Black & Yellow	Residual Mastic Basement	ND	--	--	--	O	100
S13123-01 -11	MFC-2	Black & Yellow	Residual Mastic Basement	ND	--	CELL	Trace	O	100
S13123-01 -12	MFC-3	Black & Yellow	Residual Mastic Basement	ND	--	--	--	O	100
S13123-01 -13	MMA-1	Grey	Blown-in Insulation Attic	ND	--	FBGL CELL	98 <1	O	1
S13123-01 -14	MMA-2	Yellow	12x12 Floor Tile (On Wood) Kitchen	ND	--	FBGL CELL	97 <1	O	2
S13123-01 -15	MMA-3	Yellow	12x12 Floor Tile (On Wood) Kitchen	ND	--	FBGL CELL	95 3	O	2
S13123-01 -16	MMB-1	Grey	Ceramic Tile Mastic Kitchen Walls	ND	--	--	--	O	100
S13123-01 -17	MMB-2	Grey	Ceramic Tile Mastic Kitchen Walls	ND	--	--	--	O	100
S13123-01 -18	MMB-3	Grey	Ceramic Tile Mastic Kitchen Walls	ND	--	--	--	O	100

Analysis Comments:

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CROC-Crocidolite	WOLL-Wollastonite	O-Other Matrix
TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

Karen Buehler

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP

NVLAP Laboratory # 101732

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PLM LABORATORY REPORT

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		DATE RECEIVED:	March 20, 2013
CLIENT:	United Analytical Services	UAS SAM#:	S13123-01
ATTENTION:	Thad Daniels	JOB LOCATION:	DuPage County Storm Water Management 4N 064 Arthur St., Addison
FAX:	(630)691-1819		

LAB SAMPLE #	CLIENT SAMPLE #	COLOR	DESCRIPTION LOCATION	ASBESTOS TYPE	%	OTHER FIBERS	%	MATRIX	%
S13123-01 -19	MMC-1	Grey	Ceramic Tile Mastic Basement Lower Walls	ND	--	--	--	O	100
S13123-01 -20	MMC-2	Grey	Ceramic Tile Mastic Basement Lower Walls	ND	--	CELL	Trace	O	100
S13123-01 -21	MMC-3	Grey	Ceramic Tile Mastic Basement Lower Walls	ND	--	CELL	Trace	O	100

Analysis Comments:

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TREM-Tremolite	H-Hair	
ACTN-Actinolite	O-Other (Specify)	
ANTH-Anthophyllite		

ANALYZED BY - Karen Buehler / Laboratory Manager

March 21, 2013
DATE ANALYZED

NVLAP
NVLAP Laboratory # 101732

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Illinois Department of
PUBLIC HEALTH

Pat Quinn, Governor
LaMar Hasbrouck, MD, MPH, Director

525-535 West Jefferson Street • Springfield, Illinois 62761-0001 • www.idph.state.il.us

1/24/2013

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133

ASBESTOS PROFESSIONAL LICENSE ID NUMBER: 02620

Enclosed is your Asbestos Professional License that expires 05/15/2014

	CERTIFICATE EXPIRATION DATE
INSPECTOR	1/4/2014
PROJECT DESIGNER	12/11/2013
MANAGEMENT PLANNER	1/4/2014
PROJECT MANAGER	11/30/2013
AIR SAMPLING PROFESSIONAL	

If you have any questions or need further assistance, contact the Asbestos Program at (217)782-3517 or fax (217)785-5897.
Our WEB address is http://www.idph.state.il.us/envhealth/ehhome.htm

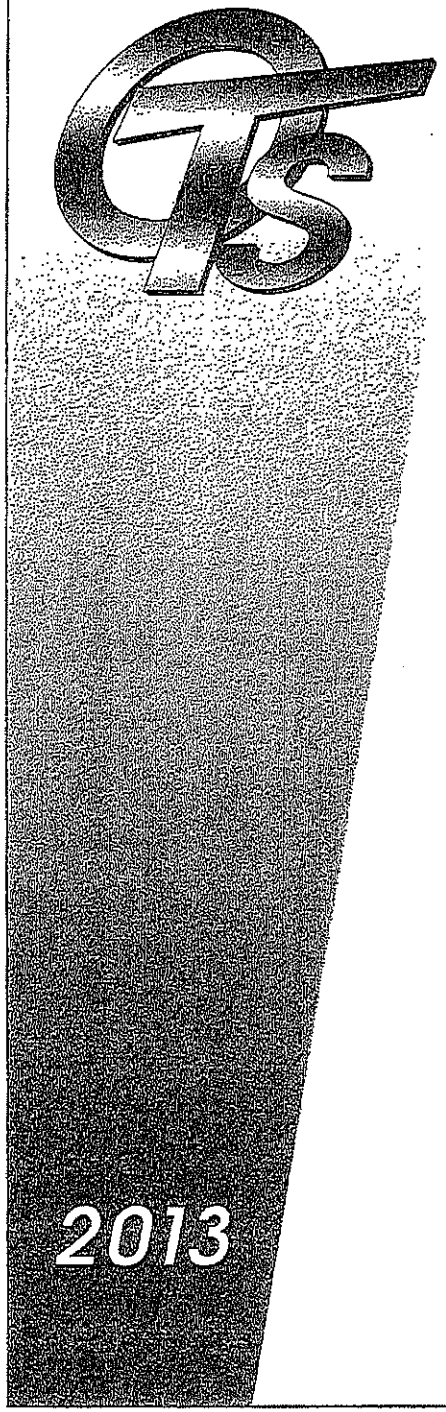
Illinois Department of
PUBLIC HEALTH

ASBESTOS
PROFESSIONAL
LICENSE

ID NUMBER	ISSUED	EXPIRES
100 - 02620	2/8/2013	05/15/2014

MICHAEL A GLENN
5731 ESSEX COURT
HANOVER PARK, IL 60133

Environmental Health



Occupational Training & Supply, Inc.

7233 Adams Street • Willowbrook, IL 60527 • (630) 655-3900

Asbestos Building Inspector Refresher

Occupational Training and Supply, Inc. certifies that

Michael Glenn

has successfully completed the 4 hour Asbestos Building Inspector Refresher Course
and has passed the competency exam with a minimum score of 70%. The course is accredited by the Illinois Department of Public Health and Indiana Department of Environmental Management for purposes of accreditation in accordance with EPA 10 CFR 763 Asbestos Hazard Emergency Response Act (AHERA) and TSCA Title II.

Certificate: BIR1301040040

Exam Date: 1/4/2013

Course Date: 1/4/2013

Expiration Date: 1/4/2014

Kathy DeSalvo

Kathy DeSalvo, Director

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

United Analytical Services, Inc.
1429 Centre Circle Drive
Downers Grove, IL 60515
Dr. Kevin Aikman
Phone: 630-691-8271 Fax: 630-691-1819
E-Mail: kaikman@uas1.com
URL: http://www.uas1.com

BULK ASBESTOS FIBER ANALYSIS (PLM) **NVLAP LAB CODE 101732-0**

NVLAP Code	*Designation / Description*
18/A01	EPA-600/M4-82-020: Interim Method for the Determination of Asbestos in Bulk Insulation Samples

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2005

NVLAP LAB CODE: 101732-0

United Analytical Services, Inc.

Downers Grove, IL

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2012-07-01 through 2013-06-30

Effective dates

For the National Institute of Standards and Technology