

CAROLINA ENVIRONMENTAL, INC.
 107 New Edition Court, Cary, NC 27511
 Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: **MKM Engineers, INC.**
 8451 State Route 5
 Building 1038
 Ravenna, OH 44266

CEI Lab Code: A03-3937
 Received: 05-15-03
 Analyzed: 05-15-03
 Reported: 05-15-03
 Analyst: Anna Malmberg

Project: LL#6 Drying Oven
 Project # 2F19-001-Door

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
2F19-001-Door	A151071	<u>INTERIOR DOOR MATERIAL</u> Homogeneous, Grey, Fibrous, Loosely Bound	ND
		FBGL 100 %	

The following definitions apply to the abbreviations used in the ASBESTOS
BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: LL#6 Drying Oven
Project # 2F19-001-Door

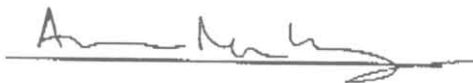
CEI LAB CODE: A03-3937

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.


Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
CLIENT ANALYSIS REQUEST**

A03-3937
A151071
①

May-15-03 02:33pm From-CAROLINA ENVIRONMENTAL +4811442 T-269 P.04/04 F-682

CLIENT: MKM Engineers, Inc.				PROJECT MANAGER: Brian Stockwell											
ADDRESS: 8451 SR 5				PHONE: (330) 358-2920											
Ravenna, Ohio 44266				FAX: (330) 358-2924											
PROJECT DESCRIPTION	Sample ID PROJECT CODE	ASBESTOS						LEAD				Other Analysis	TURN-AROUND TIME		
		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air				
LL #6 Drying Oven	2F19-001-DOOR X	X	<10%												
REMARKS: * only point count if bulk analysis is <10%.															
Interior door material of a drying oven located at RVAAP LL #6 in building 2F-19.															
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY:				DATE/TIME:				CLIENT ID#	Samples will be disposed of 30 days after analysis, unless otherwise requested.		
		5/14/03 0900		Kathy Smith				5/15/03 10:00							
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY:				DATE/TIME:							

CAROLINA ENVIRONMENTAL, INC.
107 New Edition Court, Cary, NC 27511
Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: **MKM Engineers, INC.**
8451 State Route 5
Building 1038
Ravenna, OH 44266

CEI Lab Code: A02-8013
Received: 12-13-02
Analyzed: 12-13-02
Reported: 12-13-02
Analyst: Gregory J. Hanes

Project: RVAAP-LL#6

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
LL6-FPB-01	A102219	<u>HETEROGENEOUS.</u> Black, Fibrous, Bound BIND 15 % CELL 85 %	ND
LL6-FPB-02	A102220	<u>HETEROGENEOUS.</u> Black, Fibrous, Bound BIND 15 % CELL 85 %	ND
LL6-FPB-03	A102221	<u>HETEROGENEOUS.</u> Black, Fibrous, Bound BIND 15 % CELL 85 %	ND

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: RVAAP-LL#6
CEI LAB CODE: A02-8013

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

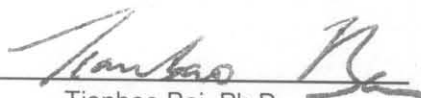
Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

002 - 8013
0102219 - 0102221

3

CHAIN OF CUSTODY RECORD

CLIENT ANALYSIS REQUEST

CLIENT: MKM Engineers, Inc.	PROJECT MANAGER: Brian Stockwell/Lew Kovarik
ADDRESS: 4153 Blubonnet Dr.	PHONE: (281) 277-5100
Stafford, TX 77477	FAX: (281) 277-5205

PROJECT DESCRIPTION	Sample ID PROJECT CODE	ASBESTOS						LEAD				TURN-AROUND TIME	
		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air		Other Analysis
RVAAP-LL #6	LL6-FPB-01	X	X<10%										<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input type="checkbox"/> 24 HOUR <input checked="" type="checkbox"/> 4 HOUR
RVAAP-LL #6	LL6-FPB-02	X	X<10%										
RVAAP-LL #6	LL6-FPB-03	X	X<10%										
													CLIENT ID# 2484

REMARKS:
Stop bulk analysis after first positive result within the sample group. Point count all samples <10% by PLM bulk.

Samples will be disposed of 30 days after analysis, unless otherwise requested.

RELINQUISHED BY: James Panozzo/ <i>[Signature]</i>	DATE/TIME: 12-12-02/14:00	RECEIVED BY: <i>[Signature]</i>	DATE/TIME: 12/13/02 10:00
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:



CERTIFICATE OF ANALYSIS



Client: GPL Environmental Services, Inc.
Address: 202 Perry Parkway
 Gaithersburg, Maryland 20877
Attention: Debbie Griffiths

Job Name: Not Provided
Job Location: Not Provided
Job Number: 211020
P.O. Number: 211020

Chain Of Custody: 105963
Date Analyzed: 11/12/02
Person Submitting: Debbie Griffiths

Summary of Results of Water Borne Asbestos Analysis by TEM - USEPA and NY ELAP Method 198.2

AMA Sample Number	Client Sample Number	Sample Type	Sample Aliquot (ml)	Filter Collection Area (mm ²)	Filter Area Analyzed (mm ²)	Sensitivity (MFL)		Fiber Count		Total Fiber Conc. (MFL)			Long Fiber Conc. (MFL)			Comments
						Total Fibers	Long Fibers	Total Fibers	Long Fibers	Mean	95 % UCL	95 % LCL	Mean	95 % UCL	95 % LCL	
0309036	LL6-SW-TC1-SW 1	Not Provided	1	1260	0.114	11.053	11.053	NAD	NAD	<40.773	40.773	N/A	< 40.773	40.773	N/A	
0309037	LL6-SW-TC1-SW 2	Not Provided	1	1260	0.114	11.053	11.053	NAD	NAD	<40.773	40.773	N/A	< 40.773	40.773	N/A	

Please Note: EPA requires analysis of 'long' asbestos fibers (>10 um), where as New York State ELAP 198.2 requires analysis of 'long' and 'short' asbestos fibers (>0.5um). EPA also recently promulgated an MCL (maximum containment level) of 7 MFL (millions of fibers per liter) for long (>10um) asbestos fibers for primary drinking water samples.

Limit of Detection: The Limit of Detection (LOD) for this method is equal to four asbestos fibers. If the sample had no asbestos detected (NAD) the mean asbestos concentration is reported as less than the 95% UCL (upper confidence limit), which is 369 % of the analytical sensitivity. If 1 to 3 fibers were detected, the mean asbestos concentration is reported as less than the 95 % UCL. A lower confidence limit (LCL) does not apply (N/A) for samples in which three or fewer asbestos fibers were detected.

Analytical Sensitivity: Typical analytical sensitivities for drinking water samples should be < 10 MFL for 'total' asbestos and <0.2 MFL for 'long' asbestos fibers. Analytical sensitivities may be much higher for non-drinking water samples due to the high concentration of suspended particulate which requires using small aliquots to make usable sample preparations.

Method of Analysis: The method of analysis used is the New York ELAP 198.2 as revised on 6/01/95. This method is based on the Chatfield and Dillion "Analytical Method for the Determination of Asbestos", 1983 (EPA-600/4-84-043) and complies with both USEPA 100.1 and New York State regulations.

Asbestos Types: Chry = Chrysotile; Amos = Amosite; Croc = Crocidolite; Trem = Tremolite; Actn = Actinolite; Anth = Anthophyllite

Andreas Saldivar

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP Accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples.

Summary of Results	
LL 6 & 9 & Wet Storage Area Bulk Asbestos Samples	
LL6 Drying Oven	
Sample Date: 05/14/2003	
Sample Id	% Asbestos
2F19-001-Door	ND
LL6 Electric Panel Backing	
Sample Date: 12/12/2002	
Sample Id	% Asbestos
LL6-FPB-01	ND
LL6-FPB-02	ND
LL6-FPB-03	ND
LL6 Concrete Tar Paper	
Sample Date: 08/13/2003	
Sample Id	% Asbestos
LL6-CNTR-001	ND
LL6 Lead Floor Backing	
Sample Date: 06/09/2003	
Sample Id	% Asbestos
LL6-FB-001	CHRY 35%
LL9 Lead Floor Backing	
Sample Date: 06/09/2003	
Sample Id	% Asbestos
LL9-FB-001	CHRY 25%
WS-FB-Wet Storage Lead Floor Backing	
Sample Date: 06/09/2003	
Sample Id	% Asbestos
WS-FB-001	CHRY 35%
WS-TP-Wet Storage Tar Paper	
Sample Date: 06/09/2003	
Sample Id	% Asbestos
WS-TP-001	ND
WS-TP-002	ND
WS-TP-003	ND
Wet Storage Mastic Waste Char	
Sample Date: 06/09/2003	
Sample Id	% Asbestos
111103-RA-01	CHRY 25% TAR 75%
<p>The following definitions apply to the abbreviations used in the Asbestos Bulk Analysis Report</p> <p>ND= None Detected</p> <p>CHRY=Chrysotile</p>	

CAROLINA ENVIRONMENTAL, INC.
107 New Edition Court, Cary, NC 27511
Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: MKM Engineers, INC.
8451 State Route 5
Building 1038
Ravenna, OH 44266

CEI Lab Code: A03-4573
Received: 06-10-03
Analyzed: 06-10-03
Reported: 06-10-03
Analyst: Essie J. Spencer

Project: LL#9 Lead Floor Backing

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
LL9-FB-001	A157977	<u>FLOOR BACKING</u> Heterogeneous, Black, Brown, Fibrous, Bound CHRY 25 % BIND 40 % CELL 25 % FBGL 5 % SYNT 5 %	CHRY 25 %
LL9-FB-002	A157978		
NOT ANALYZED			
LL9-FB-003	A157979		
NOT ANALYZED			
LL9-FB-004	A157980		
LL9-FB-005	A157981		
NOT ANALYZED			
LL9-FB-006	A157982		
NOT ANALYZED			

CAROLINA ENVIRONMENTAL, INC.
107 New Edition Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: LL#9 Lead Floor Backing

Lab Code: A03-4573

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
LL9-FB-007	A157983		
NOT ANALYZED			
LL9-FB-008	A157984		
NOT ANALYZED			
LL9-FB-009	A157984		
NOT ANALYZED			

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: LL#9 Lead Floor Backing
CEI LAB CODE: A03-4573

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

A03-4573
A15797 A15785 (9)

**CHAIN OF CUSTODY RECORD
CLIENT ANALYSIS REQUEST**

CLIENT: MKM Engineers, Inc.				PROJECT MANAGER: Brian Stockwell											
ADDRESS: 8451 St. Rte. 5				PHONE: (330) 358-2920											
Bldg. 1038				FAX: (330) 358-2924											
Ravenna, Ohio 44266				ASBESTOS					LEAD						
PROJECT DESCRIPTION	Sample ID PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME		
LL#9 Lead Floor Backing	LL9-FB-001	X	<10%										<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input checked="" type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR		
LL#9 Lead Floor Backing	LL9-FB-002	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-003	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-004	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-005	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-006	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-007	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-008	X	<10%												
LL#9 Lead Floor Backing	LL9-FB-009	X	<10%												
REMARKS:												CLIENT ID#			
Stop analysis in each sample group after first positive. Only run point count if PLM bulk is <10%.															
Samples will be disposed of 30 days after analysis, unless otherwise requested.															
RELINQUISHED BY: <i>[Signature]</i>				DATE/TIME: 6/9/03 - 1530				RECEIVED BY: <i>[Signature]</i>				DATE/TIME: 6/10/03 10:45			
RELINQUISHED BY:				DATE/TIME:				RECEIVED BY:				DATE/TIME:			



CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
 ASBESTOS ANALYSIS**

Client:		Project Manager:													
Address:		Phone:													
		Fax:													
		ASBESTOS						LEAD PAINT						TURN-AROUND TIME	
PO # :		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis			
PROJECT DESCRIPTION	PROJECT CODE														
REMARKS:															
														<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR	
														CLIENT ID#	
														Samples will be disposed of 30 days after analysis, unless otherwise requested.	
Relinquished By:		Date / Time:				Received By:				Date / Time:					
Relinquished By:		Date / Time:				Received By:				Date / Time:					

CAROLINA ENVIRONMENTAL, INC.
107 New Edition Court, Cary, NC 27511
Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: MKM Engineers, INC.
8451 State Route 5
Building 1038
Ravenna, OH 44266

CEI Lab Code: A03-4572
Received: 06-10-03
Analyzed: 06-11-03
Reported: 06-11-03
Analyst: Essie J. Spencer

Project: WS-FB Wet Storage Lead Floor Backing

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
WS-FB-001	A157973	<u>FLOOR BACKING</u> Heterogeneous, Tan, Brown, Fibrous, Loosely Bound CHRY 35 % BIND 45 % CELL 15 % FBGL 5 %	CHRY 35 %

WS-FB-002 A157974

NOT ANALYZED

WS-FB-003 A157975

NOT ANALYZED

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: WS-FB Wet Storage Lead Floor Backing
CEI LAB CODE: A03-4572

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
CLIENT ANALYSIS REQUEST**

CLIENT: MKM Engineers, Inc.		PROJECT MANAGER: Brian Stockwell											
ADDRESS: 8451 St. Rte. 5		PHONE: (330) 358-2920											
Bldg. 1038		FAX: (330) 358-2924											
Ravenna, Ohio 44266		ASBESTOS					LEAD						
PROJECT DESCRIPTION	Sample ID PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME
Wet Storage Lead Floor Backing	WS-FB-001	X	<10%										<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input checked="" type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR
Wet Storage Lead Floor Backing	WS-FB-002	X	<10%										
Wet Storage Lead Floor Backing	WS-FB-003	X	<10%										
												CLIENT ID#	
REMARKS: Stop analysis in each sample group after first positive. Only run point count if PLM bulk is <10%.												Samples will be disposed of 30 days after analysis, unless otherwise requested.	
RELINQUISHED BY: 		DATE/TIME: 6/9/03 - 1530				RECEIVED BY: 			DATE/TIME: 6/10/03 10:15				
RELINQUISHED BY:		DATE/TIME:				RECEIVED BY:			DATE/TIME:				



CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
 ASBESTOS ANALYSIS**

Client:		Project Manager:												
Address:		Phone:												
		Fax:												
		ASBESTOS						LEAD PAINT						TURN-AROUND TIME
PO # :		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis		
PROJECT DESCRIPTION	PROJECT CODE													
REMARKS:														
													<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR	
													CLIENT ID#	
													Samples will be disposed of 30 days after analysis, unless otherwise requested.	
Relinquished By:		Date / Time:			Received By:					Date / Time:				
Relinquished By:		Date / Time:			Received By:					Date / Time:				

CAROLINA ENVIRONMENTAL, INC.
 107 New Edition Court, Cary, NC 27511
 Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: MKM Engineers, INC.
 8451 State Route 5
 Building 1038
 Ravenna, OH 44266

CEI Lab Code: A03-4571
Received: 06-10-03
Analyzed: 06-11-03
Reported: 06-11-03
Analyst: Essie J. Spencer

Project: WS-TP Wet Storage Tar Paper

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS												
WS-TP-001	A157971	<u>WET STORAGE TAR PAPER</u> Heterogeneous, Black, Brown, Fibrous, Loosely Bound	ND												
		<table> <tr> <td>BIND</td> <td>45 %</td> <td>CELL</td> <td>35 %</td> </tr> <tr> <td></td> <td></td> <td>FBGL</td> <td>10 %</td> </tr> <tr> <td></td> <td></td> <td>SYNT</td> <td>10 %</td> </tr> </table>	BIND	45 %	CELL	35 %			FBGL	10 %			SYNT	10 %	
BIND	45 %	CELL	35 %												
		FBGL	10 %												
		SYNT	10 %												
WS-TP-002	A157972	<u>WET STORAGE TAR PAPER</u> Heterogeneous, Black, Brown, Fibrous, Loosely Bound	ND												
		<table> <tr> <td>BIND</td> <td>45 %</td> <td>CELL</td> <td>35 %</td> </tr> <tr> <td></td> <td></td> <td>FBGL</td> <td>10 %</td> </tr> <tr> <td></td> <td></td> <td>SYNT</td> <td>10 %</td> </tr> </table>	BIND	45 %	CELL	35 %			FBGL	10 %			SYNT	10 %	
BIND	45 %	CELL	35 %												
		FBGL	10 %												
		SYNT	10 %												
WS-TP-003	A157973	<u>WET STORAGE TAR PAPER</u> Heterogeneous, Black, Brown, Fibrous, Loosely Bound	ND												
		<table> <tr> <td>BIND</td> <td>45 %</td> <td>CELL</td> <td>35 %</td> </tr> <tr> <td></td> <td></td> <td>FBGL</td> <td>10 %</td> </tr> <tr> <td></td> <td></td> <td>SYNT</td> <td>10 %</td> </tr> </table>	BIND	45 %	CELL	35 %			FBGL	10 %			SYNT	10 %	
BIND	45 %	CELL	35 %												
		FBGL	10 %												
		SYNT	10 %												

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: WS-TP Wet Storage Tar Paper
CEI LAB CODE: A03-4571

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST



REVIEWED BY



Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
CLIENT ANALYSIS REQUEST**

CLIENT: MKM Engineers, Inc.				PROJECT MANAGER: Brian Stockwell											
ADDRESS: 8451 St. Rte. 5				PHONE: (330) 358-2920											
Bldg. 1038				FAX: (330) 358-2924											
Ravenna, Ohio 44266				ASBESTOS					LEAD						
PROJECT DESCRIPTION	Sample ID PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME		
LL#6 Lead Floor Backing	LL6-FB-001	X	<10%										<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input checked="" type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR		
LL#6 Lead Floor Backing	LL6-FB-002	X	<10%												
LL#6 Lead Floor Backing	LL6-FB-003	X	<10%												
													CLIENT ID#		
REMARKS: Stop analysis in each sample group after first positive. Only run point count if PLM bulk is <10%.													Samples will be disposed of 30 days after analysis, unless otherwise requested.		
RELINQUISHED BY: <i>[Signature]</i>				DATE/TIME: 6/9/03 - 1530				RECEIVED BY: <i>[Signature]</i>				DATE/TIME: 6/10/03 10:15			
RELINQUISHED BY:				DATE/TIME:				RECEIVED BY:				DATE/TIME:			

A157968
69
70

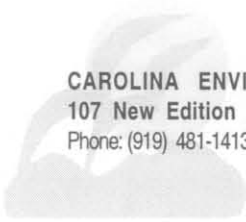


CAROLINA ENVIRONMENTAL, INC.

107 New Edition Court, Cary, NC 27511
 Tel: 866-481-1412; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
 ASBESTOS ANALYSIS**

Client:		Project Manager:													
Address:		Phone:													
		Fax:													
		ASBESTOS					LEAD PAINT								
PO # :		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME		
PROJECT DESCRIPTION	PROJECT CODE														
													<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR		
													CLIENT ID#		
REMARKS:													Samples will be disposed of 30 days after analysis, unless otherwise requested.		
Relinquished By:		Date / Time:			Received By:					Date / Time:					
Relinquished By:		Date / Time:			Received By:					Date / Time:					



CAROLINA ENVIRONMENTAL, INC.
 107 New Edition Court, Cary, NC 27511
 Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT

ASBESTOS BULK ANALYSIS

Client: MKM Engineers, INC.
 8451 State Route 5
 Building 1038
 Ravenna, OH 44266

CEI Lab Code: A03-4570
Received: 06-10-03
Analyzed: 06-11-03
Reported: 06-11-03
Analyst: Essie J. Spencer

Project: LL#6 Lead Floor Backing

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
LL6-FB-001	A157968	<u>FLOOR BACKING</u> Heterogeneous, Black, Brown, Fibrous, Loosely Bound CHRY 35 % BIND 50 % CELL 10 % SYNT 5 %	CHRY 35 %
LL6-FB-002	A157969		
NOT ANALYZED			
LL6-FB-003	A157970		
NOT ANALYZED			

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

PROJECT: LL#6 Lead Floor Backing
CEI LAB CODE: A03-4570

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.



ANALYST



REVIEWED BY

Tianbao Bai, Ph.D.
Laboratory Director

End of Report



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

**CHAIN OF CUSTODY RECORD
CLIENT ANALYSIS REQUEST**

CLIENT: MKM Engineers, Inc.				PROJECT MANAGER: Brian Stockwell											
ADDRESS: 8451 St. Rte. 5				PHONE: (330) 358-2920											
Bldg. 1038				FAX: (330) 358-2924											
Ravenna, Ohio 44266				ASBESTOS						LEAD					
PROJECT DESCRIPTION	Sample ID PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME		
A157971 72 73 Wet Storage Tar Paper	WS-TP-001	X	<10%										<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input checked="" type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR		
Wet Storage Tar Paper	WS-TP-002	X	<10%												
Wet Storage Tar Paper	WS-TP-003	X	<10%												
													CLIENT ID#		
REMARKS: Stop analysis in each sample group after first positive. Only run point count if PLM bulk is <10%.													Samples will be disposed of 30 days after analysis, unless otherwise requested.		
RELINQUISHED BY: <i>[Signature]</i>				DATE/TIME: 6/9/03 - 1530				RECEIVED BY: <i>[Signature]</i>				DATE/TIME: 6/10/03 10:15			
RELINQUISHED BY:				DATE/TIME:				RECEIVED BY:				DATE/TIME:			



CAROLINA ENVIRONMENTAL, INC.

**CHAIN OF CUSTODY RECORD
ASBESTOS ANALYSIS**

107 New Edition Court, Cary, NC 27511
Tel: 866-481-1412; Fax: 919-481-1442

Client:		Project Manager:												
Address:		Phone:												
		Fax:												
		ASBESTOS						LEAD PAINT					TURN-AROUND TIME	
PO # :		PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis		
PROJECT DESCRIPTION	PROJECT CODE													
														<input type="checkbox"/> 3 - 5 DAY <input type="checkbox"/> 48 HOUR <input type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR
													CLIENT ID#	
REMARKS:													Samples will be disposed of 30 days after analysis, unless otherwise requested.	
Relinquished By:		Date / Time:			Received By:					Date / Time:				
Relinquished By:		Date / Time:			Received By:					Date / Time:				

CAROLINA ENVIRONMENTAL, INC.
 107 New Edition Court, Cary, NC 27511
 Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT ASBESTOS BULK ANALYSIS

Client: **MKM Engineers, INC.**
 8451 State Route 5
 Building 1038
 Ravenna, OH 44266

CEI Lab Code: A03-6318
 Received: 08-15-03
 Analyzed: 08-18-03
 Reported: 08-18-03
 Analyst: Anna Malmberg

Project: LL #6 Demo

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
LL6-CNTR-001	A179534	<u>HETEROGENEOUS,</u> Heterogeneous, Black, Fibrous, Bound BIND 80 % CELL 15 % SYNT 5 %	ND

LL 6 ZF-1 - Tar material
 between concrete pads

A 179534 (10)

CHAIN OF CUSTODY RECORD

CLIENT ANALYSIS REQUEST



CAROLINA ENVIRONMENTAL, INC.

102-H Commonwealth Court, Cary, NC 27511
Tel: 919-481-1413; Fax: 919-481-1442

T-590 P. 04/04 F-638

+4811442

From-CAROLINA ENVIRONMENTAL

Aug-18-03 08:09am

CLIENT: MKM Engineers, Inc.				PROJECT MANAGER: Brian Stockwell									
ADDRESS: 8451 St. Rte. 5				PHONE: (330) 358-2920									
Bldg. 1038				FAX: (330) 358-2924									
Ravenna, Ohio 44266				ASBESTOS				LEAD					
PROJECT DESCRIPTION	Sample ID PROJECT CODE	PLM Bulk	PLM Point Count	PLM Gravimetric	PCM Air	TEM Bulk	TEM Air	Lead Paint	Lead Wipe	Lead Soil	Lead Air	Other Analysis	TURN-AROUND TIME
LL #6 Demo	LL6-CNTR-001	X	<10%										<input type="checkbox"/> 3-5 DAY <input type="checkbox"/> 48 HOUR <input checked="" type="checkbox"/> 24 HOUR <input type="checkbox"/> 4 HOUR
													CLIENT ID#
REMARKS:												Samples will be disposed of 30 days after analysis, unless otherwise requested.	
Only conduct point count analysis if the PLM bulk analysis result is <10%.													
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY:				DATE/TIME:					
James E. Panozzo <i>[Signature]</i>		8/13/03 / 1400		<i>[Signature]</i>				8/15/03 10:00					
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY:				DATE/TIME:					

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
N D = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: MKM Engineers, INC.

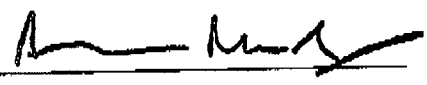
PROJECT: LL #6 Demo

CEI LAB CODE: A03-6318

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST 

REVIEWED BY 

Tianbao Bai, Ph.D.
Laboratory Director

End of Report



Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 686-5996

ASBESTOS BULK SHEET

Client: Spiker Environmental
Project: Ravenna Army Ammunition Plant
Work Order: 3-0263

Sampling Date: 11-11-03
Hygienist: Steve Masters
Bldg: Wet Storage WS-2

Lab Number	Sample Number	Material	Functional Space	FRI/ NON	Analysis
230789	111103- RA-01	Black Mastic	Wet Storage Igloo WS-2	Non	Chrysotile Asbestos 25% Tar 75%