NYC 9/11 Public Portal Document

ATC Associates

104 East 25 Street, New York, NY 10010

Phone: (212) 353-8280 Fax: (212) 353-8306

Attn: Mr. Bernard Orlan
N.Y.C. Board of Education
28-11 Queens Plaza North
Long Island City, NY 11101

Fax: (212) 475-4122 **Phone:** (212) 477-8941

Project: NYC-BOE PS 234M Project#: 14584-1823

Received: 5/21/02 9:00:00 PM
ATC Group #: 7827
Analysis Date: 5/21/02

Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Sample	*Volume*	*Area Analyzed*	*Non Asb*	*Asbestos Type(s)*	*# Structures 0.5μ-5*	*5μ*	*Analytical Sensitivity (S/cc)*	*Asbestos Concentration (S/mm²)*	*(S/cc)*	*Notes*
01 *7827 -1*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
02 *7827 -2*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
03 *7827 -3*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
04 *7827 -4*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
05 *7827 -5*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
06 *7827 -6*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
07 *7827 -7*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	

MARK PEYSAKHOV
Analyzed by:

MICHAEL A. GORYCKI, Ph.D.
Approved by:

Disclaimer: The laboratory is not responsible for data reported in structures/cc, which is dependent on volume collected by non-laboratory personnel. This lab is only responsible for data reported in structures/mm². This report may not be reproduced, except in full, without written approval by ATC Associates Inc. This report may not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. This reports relates only to the samples reported above. Quality control data (including 95% confidence limits and laboratory and analysis' accuracy and precision) is available upon request.

Accredited for NVLAP PLM/TEM #101187-0, NY State ELAP #10879

CONFIDENTIAL, CITY_21MC100_003403538

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000181750

NYC 9/11 Public Portal Document

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N.Y.C. Board of Education
28-11 Queens Plaza North
Long Island City, NY 11101
Fax: (212) 475-4122 **Phone:** (212) 477-8941
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Asbestos Fiber Analysis by Transmission Electron Microscopy (TEM) Performed by EPA 40 CFR Part 763 Final Rule (AHERA)

Sample	Volume	Area Analyzed	Non Asb	Asbestos Type(s)	# Structures 0.5μ-5	# Structures 5μ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)	Notes
08 *7827 -8*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
09 *7827 -9*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
10 *7827 -10*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
11 *7827 -11*	1944.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
12 *7827 -12*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
13 *7827 -13*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
14 *7827 -14*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
15 *7827 -15*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	

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Accredited for NVLAP PLM/TEM #101187-0, NY State ELAP #10879

CONFIDENTIAL, CITY_21MC100_003403539

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000181751

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	1	**Grid Opening Size:**	0.01124
Client Sample #:	01	**Area Examined:**	0.04496 mm²
GRID BOX:	1158	**Magnification:**	20,000
GRID ID:	3E6	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
1	08	NSD											
2	CE	—											
3	H3	—											
4	H3	—											

3E
3G

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

CONFIDENTIAL, CITY_21MC100_003403540

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000181752

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	2	**Grid Opening Size:**	0.01124
Client Sample #:	02	**Area Examined:**	0.04496 mm²
GRID BOX:	1157	**Magnification:**	20,000
GRID ID:	3 F 5	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
1 J3	NSD											
2 Q3	—											
3 C1	—											
4 F C1	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber

B = Bundle (<3 fibers <1 fiber diameter apart

C = Cluster (>3 Intersections)

M = Matrix

NSD = No Structures Detected

Grid acceptance:

<50% undissolved filter, overlapped or folded <10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES

Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1936
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	3	**Grid Opening Size:**	0.01124
Client Sample #:	03	**Area Examined:**	0.04496 mm²
GRID BOX:	1158	**Magnification:**	20,000
GRID ID:	E 20 c	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1	93	1√50											
2	X3	—c											
3	C1	—c											
4	P1	—c											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded <10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	4	**Grid Opening Size:**	0.01124
Client Sample #:	04	**Area Examined:**	0.04496 mm²
GRID BOX:	WTC	**Magnification:**	20,000
GRID ID:	4 of J	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
4 of 4	1 A1	WTC											
	2 A1	— "											
	3 D1	— "											
	4 E1	— "											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification critena observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1936
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	5	**Grid Opening Size:**	0.01124
Client Sample #:	05	**Area Examined:**	0.04496 mm²
GRID BOX:	115-E	**Magnification:**	20,000
GRID ID:	5-MC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.	Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1 GH1	NSD											
2 GH1	—											
3 GH3	—											
4 GH3	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:

<50% undissolved filter, overlapped or folded <10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	6	**Grid Opening Size:**	0.01124
Client Sample #:	06	**Area Examined:**	0.04496 mm²
GRID BOX:	15E	**Magnification:**	20,000
GRID ID:	5E6	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1	Y1	NSD											
5E 2	R1	—											
3	Q8	—											
5G 4	X8	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

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<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	7	**Grid Opening Size:**	0.01124
Client Sample #:	07	**Area Examined:**	0.04496 mm²
GRID BOX:	1152	**Magnification:**	20,000
GRID ID:	5716	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1	J9	NSD											
2	Q9	—											
3	K1	—											
4	R1	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1936
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	8	**Grid Opening Size:**	0.01124
Client Sample #:	08	**Area Examined:**	0.04496 mm²
GRID BOX:	1159	**Magnification:**	20,000
GRID ID:	60E	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
60	1 E2	NSD											
	2 D6	—											
	3 E1	—											
60E	4 J1	—											

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√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
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C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

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AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	9	**Grid Opening Size:**	0.01124
Client Sample #:	09	**Area Examined:**	0.04496 mm²
GRID BOX:	1137	**Magnification:**	20,000
GRID ID:	6HJ	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
64	1 C7	1050											
	2 D7	"											
	3 J9	"											
6J	4 Q9	"											

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<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1936
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	10	**Grid Opening Size:**	0.01124
Client Sample #:	10	**Area Examined:**	0.04496 mm²
GRID BOX:	1157	**Magnification:**	20,000
GRID ID:	7MC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1	X9	NSD	·										
2	QE	—											
3	R1	—											
4	Y1	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

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AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1944
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	11	**Grid Opening Size:**	0.01124
Client Sample #:	11	**Area Examined:**	0.04496 mm²
GRID BOX:	11-9	**Magnification:**	20,000
GRID ID:	7E6	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO.		Structure No	Structure Type				Length		ID of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
7E 1	J9	NSD											
2	Q9	"											
— 3	E-	"											
76 4	E	"											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber

B = Bundle (<3 fibers <1 fiber diameter apart

C = Cluster (>3 Intersections)

M = Matrix

NSD = No Structures Detected

Grid acceptance:

<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES

Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	12	**Grid Opening Size:**	0.01124
Client Sample #:	12	**Area Examined:**	0.04496 mm²
GRID BOX:	1157	**Magnification:**	20,000
GRID ID:	7180	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
1	X 9	NSO											
2	Q 9	+ C											
3	R 1	− C											
4	F 41	− C											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	13	**Grid Opening Size:**	0.01124
Client Sample #:	13	**Area Examined:**	0.04496 mm²
GRID BOX:	1159	**Magnification:**	20,000
GRID ID:	BOE	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
BOE 1	F2	#50											
	2 H2	— "											
BOE 3	P1	— "											
	4 V1	— "											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:
<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	14	**Grid Opening Size:**	0.01124
Client Sample #:	14	**Area Examined:**	0.04496 mm²
GRID BOX:	WSP	**Magnification:**	20,000
GRID ID:	BHJ	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
BCI	1 CI	NSO											
	2 SI	-"											
	3 KI	-"											
BJ	4 KI	-"											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber

B = Bundle (<3 fibers <1 fiber diameter apart

C = Cluster (>3 Intersections)

M = Matrix

NSD = No Structures Detected

Grid acceptance:

<50% undissolved filter, overlapped or folded <10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES

Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1936
Lab Group #:	7827	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	15	**Grid Opening Size:**	0.01124
Client Sample #:	15	**Area Examined:**	0.04496 mm²
GRID BOX:	1579	**Magnification:**	20,000
GRID ID:	EMC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/21/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	ID of Structure N or √ Chrys	Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
1	K7	NSD											
2	K7	—											
3	E3	—											
4	JJ	—											

Struct = > 0.5µ > 5:1 Aspect Ratio

√= Positive diffraction pattern properties conforming to laboratory identification criteria observed

√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
B = Bundle (<3 fibers <1 fiber diameter apart
C = Cluster (>3 Intersections)
M = Matrix
NSD = No Structures Detected

Grid acceptance:

<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opaque areas

AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	>5µ
Chrysotile					
Amphibole					
Ambiguous					
Non-Asbestos					
Non-Identified					

NYC 9/11 Public Portal Document

VATC ASSOCIATES INC.

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

Page 1 of 2

TURNAROUND TIME: ☐ 2 hrs ☐ 6 hrs ☐ 48 hrs ☐ Standard ☐ 4 hrs ☐ 24 hrs ☐ 72 hrs ☒ Other

JOB INFORMATION 7817 15118 90767-90784

2. Project Name	3. Project #	4. Project Monitor	4c. Rotameter No.
PS 234M	K1584-C823	4a. Air Sampler: M. Nathanovich.	HP107

2a. Project Address: 242 Greenwich St, NY, NY 10007

5. Action Level / Location:	6. ☐ PCM (0.8 micron MCE)	7. ☒ PEM (0.45 micron MCE)	8. Type:	
5/21 ENTIRE	Cassette/Filter Manufacturer:	Cassette/Filter Manufacturer: MMI	a. ☐ Background	c. ☐ Abatement
	Lot #:	Lot #: 01705916	b. ☐ Pre-Abate	d. ☐ Post-Abate
			e. ☐ OSHA	f. ☐ Environmental
				g. ☒ Ambient
				h. ☐ Other

AIR SAMPLE RECORD

Sample No.	Pump Number	12. Sample Location 12a. IN/A	12b. OUT/A	12c. Sample Coordinates	13. Time (24 hrs clock) 13a. Start	13b. End	13c. Total	14. Flow Rate (L/min) 14a. Start	14b. End	14b. Avg	15. Total Air Vol (liters)	16. # Fibers/Fields Minus Blank	17. Fiber Conc.
16				Field Blank									
17				Field Blank									
01				First Floor - hallway	7:02	11:03	241	8.0	8.0	8.0	1928		
02				Cafeteria	7:04	11:04	240	8.0	8.0	8.0	1920		
03				Gymnasium	7:06	11:08	242	8.0	8.0	8.0	1936		
04				Auditorium	7:08	11:09	241	8.0	8.0	8.0	1928		
05				North playground	7:10	11:12	242	8.0	8.0	8.0	1936		
06				West playground	7:12	11:13	241	8.0	8.0	8.0	1928		
07				Roof - South part	7:14	11:14	240	8.0	8.0	8.0	1920		
08				First Floor - hallway	11:03	15:05	242	8.0	8.0	8.0	1936		
09				North playground	11:12	15:13	241	8.0	8.0	8.0	1928		
10				West playground	11:13	15:15	242	8.0	8.0	8.0	1936		
11				Roof - South part	11:14	15:17	243	8.0	8.0	8.0	1944		
12				Classroom #	16:30	20:30	240	8.0	8.0	8.0	1920		

LAB INFORMATION: AIHA ELAP # 10164, NVLAP # 11[illegible]

19. Shipped By:	20. Date	21. Time	22. Lab Name	23. Date	24. Time
M	5.21.09		[illegible]	5/22	3:30

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008 CONFIDENTIAL,

CITY_21MC100_003403555

NYC-WTC_000181767

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AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

TURNAROUND TIME: ☐ 2 hrs ☐ 6 hrs ☐ 48 hrs ☐ Standard ☐ 4 hrs ☐ 24 hrs ☐ 72 hrs ☒ Other

ECT INFORMATION 7817

1.	2. Project Name	3. Project #	4. Project Monitor	4c. Rotameter Nu
YC-BCE	PS234M 2a. Project Address 292 Greenwich St, NY, NY 10007	K584-0823	4b. Air Sampler M. Vaktsmarch	HP107

5. 5/21	6. ~~Background~~ Location: ENTIRE	7. ☐ PCM (0.8 micron MCE) Cassette/Filter Manufacturer ____ Lot # ____	8. ☒ TEM (0.45 micron MCE) Cassette/Filter Manufacturer ____ Lot # ____	9. Type: a. ☐ Background b. ☐ Pre-Abate c. ☐ Abatement d. ☐ Post-Abate e. ☐ OSHA	f. ☐ Environ g. ☒ Ambient h. ☐ Other

Y AIR SAMPLE RECORD

ample ID Number	11. Pump Number	12. Sample Location 12a. NWA	12b. OWA	12c. Sample Coordinates	13. Time (24 hrs clock) 13a. Start	13b. End	13c. Total	14. Flow Rate (L/min.) 14a. Start	14b. End	14b. Avg	15. Total Air Vol (liters)	16. # Fibers/Fields Minus Blank	17. Fiber D
18				Field Blank									
				Field Blank									
13				Classroom #	16:32	20:33	241	8.0	8.0	8.0	1928		
14				Classroom #	16:34	20:35	241	8.0	8.0	8.0	1928		
15				Kindergarden	15:45	19:47	242	8.0	8.0	8.0	1936		

IN OF CUSTODY

Relinquished By	19. Received By:	20. Date:	21. Time:
	AT	5.21.2	9

LAB INFORMATION (ATC ELAP # 10879, ATC NVLAP # 1167)

22. Lab Name:	23. Date:	24. Time:
a. Analyzed By	5/22	3:30
b. QC By:		
c. Lab Comm. #		

25. Microscope Make/Serial
☐ Nikon Labophot 2
☐ Nikon Labophot 2
☐ Nikon Labophot 2

VFleischhauer

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008 CONFIDENTIAL, CITY_21MC100_00340356

NYC-WTC_000181768