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: 5/24/02 9:30:00 PM
ATC Group #: 7855
Analysis Date: 5/25/02

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	# Structures 5µ	Analytical Sensitivity (S/cc)	Asbestos Concentration (S/mm²)	Asbestos Concentration (S/cc)	Notes
01 *7855 -1*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
02 *7855 -2*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
03 *7855 -3*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
04 *7855 -4*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
05 *7855 -5*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
06 *7855 -6*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
07 *7855 -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_003403598

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000264697

NYC 9/11 Public Portal Document

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: 5/24/02 9:30:00 PM
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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 *7855 -8*	1944.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
09 *7855 -9*	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
10 *7855 -10*	1912.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
11 *7855 -11*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
12 *7855 -12*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
13 *7855 -13*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
14 *7855 -14*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
15 *7855 -15*	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:

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

CONFIDENTIAL, CITY_21MC100_003403599

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000264698

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (Liters):**	1920
Lab Group #:	7855	**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:	1166	**Magnification:**	20,000
GRID ID:	91108	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	ID of S... Chrys	Ampi...	N or √ Ambig/ND	EDS (Nonadb Elements)
1	4E9	1150										
2	66	—										
3	141	—										
4	141	—										

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
...e					
...e					
...s					
N ...s					
No ...ed					

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TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**(liters):**	1920
Lab Group #:	7855	**Filter Type / Area:**	MCE 385 mm²
Lab Sample #:	2	**Grid / Size:**	0.01124
Client Sample #:	02	**Area mined:**	0.04496 mm²
GRID BOX:	1166	**Magnification:**	20,000
GRID ID:	100K	**Accel Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO		Structure No	Structure Type				Length		Chrys	Amp	ure N or √		EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ			onast.	Ambig/ND	
1	E2	NSD											
2	P2	—											
3	J2	—											
4	Q2	—											

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

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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

NYC 9/11 Public Portal Document

TEM Asbestos (air) Coun

Client Name:	NYC BOE	...es):	1920
Lab Group #:	7855	**Filter T...**	...rea: MCE 385 mm²
Lab Sample #:	3	**Gr...**	...ize: 0.01124
Client Sample #:	03	...	...ed: 0.04496 mm²
GRID BOX:	1166	...	...on: 20,000
GRID ID:	1043	**Acc...**	...ge: 100 KeV
# Grid Openings:	4	...	...ed: 5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO		Structure No	Structure Type				Length			...or √		EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys		Ambig/ND	
1	H3	NSO										
2	H3	— c										
3	E1	— c										
4	Pc	— 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

Non-A

Non-Id

Totals

F	B	C	M	>5µ

NYC-WTC_000264701

TEM Asbestos (air) Count Sh

Client Name:	NYC BOE	...rs):	1920
Lab Group #:	7855	**Filter Ty...** ...ea:	MCE 385 mm²
Lab Sample #:	4	**Grid ...** ...ize:	0.01124
Client Sample #:	04	**Are...** ...ed:	0.04496 mm²
GRID BOX:	1166	...ion:	20,000
GRID ID:	1210	**Accel...** ...ge:	100 KeV
# Grid Openings:	4	...te:	5/25/02

Analysis Performed By: [signature]

MARK PEYSAKHOV

GO. No	Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	Chrys	Am...	N or √ ...	Ambig/ND	EDS (Nonadb Elements)
1	L1	NSD											
2	S1	—											
3	K1	—											
4	K1	—											

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

TEM Asbestos (air) Coun

Client Name:	NYC BOE	ers):	1920
Lab Group #:	7855	**Filter** Typ	rea: MCE 385 mm²
Lab Sample #:	5	Grid	Size: 0.01124
Client Sample #:	05		ned: 0.04496 mm²
GRID BOX:	1166		ion: 20,000
GRID ID:	1MC	Accel	age: 100 KeV
# Grid Openings:	4		ate: 5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO		Structure No	Structure Type				Length				N or √		EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amp		Ambig/ND	
1	E1	NSD											
2	A1	—C											
3	A6	—C											
4	D8	—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

NYC 9/11 Public Portal Document

TEM Asbestos (air) Cou[illegible]

Client Name:	NYC BOE	**ters):**	1920
Lab Group #:	7855	**Filter [illegible]**	**rea:** MCE 385 mm²
Lab Sample #:	6		**ize:** 0.01124
Client Sample #:	06	**Ar[illegible]**	**ied:** 0.04496 mm²
GRID BOX:	1166		**ion:** 20,000
GRID ID:	17 2 K	**A[illegible]**	**age:** 100 KeV
# Grid Openings:	4		**ate:** 5/25/02

Analysis Performed By: [signature]
MARK PEYSAKHOV

GO. No Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	Chrys	N or √ Ambig/ND	EDS (Nonadb Elements)
1 K1	NSD									
2 K1	—									
3 B1	—									
1 E1	—									

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

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000264704

TEM Asbestos (air) Coun[illegible]

Client Name:	NYC BOE	[illegible] ers):	1920
Lab Group #:	7855	**Filter** [illegible] **rea:**	MCE 385 mm²
Lab Sample #:	7	[illegible] **Size:**	0.01124
Client Sample #:	07	**Ar**[illegible] **ned:**	0.04496 mm²
GRID BOX:	1166	[illegible] **tion:**	20,000
GRID ID:	2010	**Accelera**[illegible] **age:**	100 KeV
# Grid Openings:	4	[illegible] **Date:**	5/25/02

Analysis Performed By: [signature]

MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	Chrys	[illegible]	N or √ sb	Ambig/ND	EDS (Nonadb Elements)
2 or 1	X9	NSD											
— 2	Q9	—											
3	R1	—											
20 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

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

CONFIDENTIAL, CITY_21MC100_003403606

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000264705

TEM Asbestos (air) Count S

Client Name:	NYC BOE	Vo	iters): 1944
Lab Group #:	7855	**Filter Typ**	Area: MCE 385 mm²
Lab Sample #:	8	**Grid O**	Size: 0.01124
Client Sample #:	08	Are	xa ined: 0.04496 mm²
GRID BOX:	1166		ation: 20,000
GRID ID:	295	**Accel**	ltage: 100 KeV
# Grid Openings:	4		Date: 5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	Chrys	Amp	N or √ sb	Ambig/ND	EDS (Nonadb Elements)
29	1 20	NSD											
	2 C1	—											
	3 E3	—											
25	4 H3	—											

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

TEM Asbestos (air) Count

Client Name:	NYC BOE	...ters):	1936
Lab Group #:	7855	**Filter Ty...** ...rea:	MCE 385 mm²
Lab Sample #:	9	**Gri...** ...Size:	0.01124
Client Sample #:	09	...ined:	0.04496 mm²
GRID BOX:	1166	...tion:	20,000
GRID ID:	3CN	**Acc...** ...tage:	100 KeV
# Grid Openings:	4	...Date:	5/25/02

Analysis Performed By: [signature]

MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	>=5µ	Chrys	...	N or √ ...b	Ambig/ND	EDS (Nonadb Elements)
1	E2	NSD											
2	P2	—											
3	E9	—											
4	39	—											

3C
—
3N

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

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (ers):**	1912
Lab Group #:	7855	**Filt Type / Filter rea:**	MCE 385 mm²
Lab Sample #:	10	**Grid Openin Size:**	0.01124
Client Sample #:	10	**Area Exan ined:**	0.04496 mm²
GRID BOX:	1166	**Magnific tion:**	20,000
GRID ID:	3PK	**Accelerating V tage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

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	Nc isb	Ambig/ND	EDS (Nonadb Elements)
1 2C	NSD											
2 V1	—											
3 M1	—											
4 B1	—											

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

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7855	**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:	4066	**Magnification:**	20,000
GRID ID:	JFEC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	Chrys	ID of Structure N or √ Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
1	V1	NSD											
2	P1	—											
3	Q8	—											
4	X9	—											

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
least 20 unfolded or overlapped grid squares
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_003403610

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000264709

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7855	**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:	1166	**Magnification:**	20,000
GRID ID:	4	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	Chr	ID of Structure N or √ Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
4	1 02	NSD											
	2 02	—											
	3 02	—											
40	4 02	—											

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 folde
<10% particulate coverage >50% coverage
least 20 unfolded or overlapped grid squa
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 #:	7855	**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:	1166	**Magnification:**	20,000
GRID ID:	EQS	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

GO. No	GO. Coord	Structure No	Structure Type F	B	C	M	Length >=05 µ <5µ	Length >=5µ	Cr...	ID of Structure N or √ Amphibole	Nonasb	Ambig/ND	EDS (Nonadb Elements)
EQ	1 P1	NSD											
	2 V1	—											
	3 J2	—											
ES	E Q2	—											

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 fol...
<10% particulate coverage >50% covera...
least 20 unfolded or overlapped grid squ...
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 #:	7855	**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:	1165	**Magnification:**	20,000
GRID ID:	5CH	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

Analysis Performed By: MARK PEYSAKHOV

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

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
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 #:	7855	**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:	1166	**Magnification:**	20,000
GRID ID:	SPK	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	5/25/02

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	EF	NSD											
2	PE	—											
3	CF	—											
4	MF	—											

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
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Grid acceptance:

<50% undissolved filter, overlapped 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					

ATC ASSOCIATES INC.

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

7855

Page 1 of 2

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

ECT INFORMATION 7855 15/18 91138-91155

YC-BCE	2. Project Name: PS 234 M 2a. Project Address: 242 Greenwich St, NY, NY 10007	3. Project #: K1584-0823	4. Project Monitor: MARK NAKHUMOVICH 4a. Air Sampler: MARK Nakhumovich	4c. Rotameter Number: HP107
5/24	6. ~~Assessment~~ Location: ENTIRE	7. ☐ PCM (0.8 micron MCE) Cassette/Filter Manufacture: ____ Lot #: ____	8. ☒ TEM (0.45 micron MCE) Cassette/Filter Manufacture: MMF Lot #: 01205916	9. Type: a. ☐ Background b. ☐ Pre-Abate c. ☐ Abatement d. ☐ Post-Abate e. ☐ OSHA f. ☐ Environmental g. ☒ Ambient h. ☐ Other

AIR SAMPLE RECORD

Sample I.D. Number	11. Pump Number	12. Sample Location: 12a. IWA	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 Conc.
16				Field Blank									
17				Field Blank									
01				First Floor - hallway	6:57	10:57	240	8.0	8.0	8.0	1920		
02				Cafeteria	6:59	10:59	240	8.0	8.0	8.0	1920		
03				Gymnasium	7:01	11:01	240	8.0	8.0	8.0	1920		
04				Auditorium	7:03	11:03	240	8.0	8.0	8.0	1920		
05				North playground	7:05	11:05	240	8.0	8.0	8.0	1920		
06				West playground	7:07	11:07	240	8.0	8.0	8.0	1920		
07				Roof - South PART	7:09	11:09	240	8.0	8.0	8.0	1920		
08				First Floor - hallway	10:57	15:00	243	8.0	8.0	8.0	1944		
09				North playground	11:05	15:07	242	8.0	8.0	8.0	1936		
10				West playground	11:07	15:06	239	8.0	8.0	8.0	1912		
11				Roof - South PART	11:09	15:10	241	8.0	8.0	8.0	1928		
12				Classroom # 201	16:00	20:00	240	8.0	8.0	8.0	1920		

N OF CUSTODY

Relinquished By	19. Received By:	20. Date:	21. Time:
	H. Gray	5.24.02	21:30

LAB INFORMATION (ATC ELAP # 10879, ATC NVLAP # 1187)

22. Lab Name: TEA	23. Date:	24. Time:
a. Analyzed By: [signature]	5/25	1:30
b. QC By:		
c. Lab Catch #:		

25. Microscope Make/Serial #: ☐ Nikon Labophot 238913 ☐ Nikon Labophot 238917 ☐ Nikon Labophot 239079

Analysis Methodology:

Project Manager: Y. Efstathiou

27. Issued To: Y. Efstathiou

28. Comments:

NYC-WTC_000264714

CONFIDENTIAL, CITY_21MC100_003403615

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

VAIC ASSOCIATES INC.

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

7855

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

ECT INFORMATION

1. NYC-BOE	2. Project Name: PS234M 2a. Project Address: 292 Greenwich St, NY, NY 10007	3. Project #: 14584-0823	4. Project Monitor: MARK NAKHUMOVICH 4a. Air Sampler: MARK Nakhumovich	4c. Rotameter Number: HP107
5/24	6. ~~Measurement~~ Location: ENTIRE	7. ☐ PCM (0.8 micron MCE) Cassette/Filter Manufacture ____ Lot # ____	8. ☒ TEM (0.45 micron MCE) Cassette/Filter Manufacture ____ Lot # ____	9. Type: a. ☐ Background b. ☐ Pre-Abate c. ☐ Abatement d. ☐ Post-Abate e. ☐ OSHA f. ☐ Environment g. ☒ Ambient h. ☐ Other

Y AIR SAMPLE RECORD

Sample I.D. Number	11. Pump Number	12. Sample Location: 12a. IWA	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 Conc
18				Field Blank									
				Field Blank									
13				Classroom #225	16:02	20:02	240	8.0	8.0	8.0	1920		
14				Classroom #220	16:04	20:04	240	8.0	8.0	8.0	1920		
15				Kindergarden	16:08	20:08	240	8.0	8.0	8.0	1920		

IN OF CUSTODY

Relinquished By:	19. Received By:	20. Date:	21. Time:
	H. Gray	5.24.02	21:30

LAB INFORMATION (ATC ELAP # 10879, ATC NVLAP # 1187)

22. Lab Name:	23. Date:	24. Time:
a. Analyzed By: [signature]	5/25	1:30
b. QC By:		
c. Lab Batch #:		

25. Microscope Make/Serial #: ☐ Nikon Labophot 238912 ☐ Nikon Labophot 238917 ☐ Nikon Labophot 239075

Analysis Method: PCM - NIOSH 7400A

26. Project Manager: Y. Efstathiou

27. Faxed To: Y. Efstathiou

Beeper/Phone #'s: (646) 772-1155

28. Comments:

CONFIDENTIAL, CITY_21MC100_003403616

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008