NYC 9/11 Public Portal Document

ATC Associates

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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: H.S. of Economics & Finance, 100 Trinity Pl., NYC

Received: 4/7/02 4:00:00 PM
ATC Group #: 7351
Analysis Date: 4/8/02

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
03 7351 -1	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
04 7351 -2	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
05 7351 -3	1936.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
06 7351 -4	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
07 7351 -5	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
08 7351 -6	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
09 7351 -7	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	

MICHAEL GORYCKI
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

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SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000179542

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: H.S. of Economics & Finance, 100 Trinity Pl., NYC

Received: 4/7/02 4:00:00 PM
ATC Group #: 7351
Analysis Date: 4/8/02

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*
10 *7351 -8*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
11 *7351 -9*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
12 *7351 -10*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
13 *7351 -11*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
14 *7351 -12*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
15 *7351 -13*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
16 *7351 -14*	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
17 *7351 -15*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	
18 *7351 -16*	1928.00	0.0450	0	None Detected	0	0	0.0044	<22.24	<0.0044	

MICHAEL GORYCKI
Analyzed by:

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

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NYC-WTC_000179543

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: H.S. of Economics & Finance, 100 Trinity Pl., NYC

Received: 4/7/02 4:00:00 PM
ATC Group #: 7351
Analysis Date: 4/8/02

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*
19 7351 -17	1920.00	0.0450	0	None Detected	0	0	0.0045	<22.24	<0.0045	
7351 -18	0.00	0.0450	0	None Detected	0	0	#Div/0!	<22.24	<#Div/0 #Div/0	

MICHAEL GORYCKI
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.

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NYC-WTC_000179544

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TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	1	**Grid Opening Size:**	0.01124
Client Sample #:	03	**Area Examined:**	0.04496 mm²
GRID BOX:	100	**Magnification:**	20,000
GRID ID:	3H5	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MICHAEL GORYCKI

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)
1	K9	NSD											
2	J9	4											
3	N1	1											
4	H1	"											

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 unfoldec 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 #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	2	**Grid Opening Size:**	0.01124
Client Sample #:	04	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	9AC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MGC

MICHAEL GORYCKI

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)
1	D3	NSD											
2	E3	"											
3	X1	"											
4	P1	"											

9A

9C

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 foldec <10% particulate coverage >50% coverage ate least 20 unfolded or overlapped grid squares <5% holes or opacue 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):**	1936
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	3	**Grid Opening Size:**	0.01124
Client Sample #:	05	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	9EC	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MBG

MICHAEL GORYCKI

9E

96

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)
1	K9	NSD											
2	F9	"											
3	R7	"											
4	Q7	"											

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):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	4	**Grid Opening Size:**	0.01124
Client Sample #:	06	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	9I1013	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MGG
MICHAEL GORYCKI

GO.		Structure	Structure Type				Length		ID of Structure N or √				EDS
No	Coord	No	F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	(Nonadb Elements)
9I	1 P7	NSD											
	2 V7	"											
	3 H3	"											
	4 N3	"											
10B													

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 gric 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-WTC_000179548

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	5	**Grid Opening Size:**	0.01124
Client Sample #:	07	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	10DF	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MAG
MICHAEL GORYCKI

GO.		Structure	Structure Type				Length		ID of Structure N or √				EDS
No	Coord	No	F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	(Nonadb Elements)
100 1	D7	NSD											
2	H7	9											
3	G9	4											
4	H2	9											
10F													

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					

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000179549

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	6	**Grid Opening Size:**	0.01124
Client Sample #:	08	**Area Examined:**	0.04496 mm²
GRID BOX:	10H5	**Magnification:**	20,000
GRID ID:	10HJ	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MICHAEL GORYCKI

10H

10J

GO		Structure No	Structure Type				Length		IC of Structure N or √				EDS (Nonadb Elements)
No	Coord		F	B	C	M	>=05 µ <5µ	>=5µ	Chrys	Amphibole	Nonasb	Ambig/ND	
1	V9	NSD											
2	P9	"											
3	H3	"											
4	I3	"											

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):	1920
Lab Group #:	7351	Filter Type / Filter Area:	MCE 385 mm²
Lab Sample #:	7	Grid Opening Size:	0.01124
Client Sample #:	09	Area Examined:	0.04496 mm²
GRID BOX:	10/5	Magnification:	20,000
GRID ID:	1LN	Accelerating Voltage:	100 KeV
# Grid Openings:	4	Analysis Date:	4/7/02

Analysis Performed By: MAG
MICHAEL GORYCKI

1L
1N

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)
1	N1	NSD											
2	R1	"											
3	R7	"											
4	V7	"											

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-WTC_000179551

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	8	**Grid Opening Size:**	0.01124
Client Sample #:	10	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	1PR	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MAG

MICHAEL GORYCKI

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)
1	X7	NSD											
2	V7	"											
3	R4	"											
4	Q4	"											

1P

1R

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 leas: 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					

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SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000179552

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	9	**Grid Opening Size:**	0.01124
Client Sample #:	11	**Area Examined:**	0.04496 mm²
GRID BOX:	C15	**Magnification:**	20,000
GRID ID:	2T2R	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MBG
MICHAEL GORYCKI

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	Q9	NSD											
2	R9	"											
3	Q7	"											
4	P7	"											

IT / 2K

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 <" 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):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	10	**Grid Opening Size:**	0.01124
Client Sample #:	12	**Area Examined:**	0.04496 mm²
GRID BOX:	0015	**Magnification:**	20,000
GRID ID:	2MD	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MICHAEL GORYCKI

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)
1	J3	NSD											
2	E3	"											
3	P1	"											
4	N1	"											

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					

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NYC-WTC_000179554

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	11	**Grid Opening Size:**	0.01124
Client Sample #:	13	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	20 S	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MB

MICHAEL GORYCKI

20

25

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	EQ	NSD											
2	FQ	"											
3	PQ	"											
4	QQ	"											

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 #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	12	**Grid Opening Size:**	0.01124
Client Sample #:	14	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	3LN	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MICHAEL GORYCKI

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)
3L													
1	V1	NSD											
2	X1	4											
3	P1	4											
4	N1	4											
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
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 #:	7351	Filter Type / Filter Area:	MCE 385 mm²
Lab Sample #:	13	Grid Opening Size:	0.01124
Client Sample #:	15	Area Examined:	0.04496 mm²
GRID BOX:	1015	Magnification:	20,000
GRID ID:	3DA	Accelerating Voltage:	100 KeV
# Grid Openings:	4	Analysis Date:	4/7/02

Analysis Performed By: MG
MICHAEL GORYCKI

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	
3P 1 H9	NSD											
2 G9	11											
3 F9	4											
4 N9	4											
3R												

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 foldec
<10% particulate coverage >50% coverage ate least 20 unioided 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-WTC_000179557

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	14	**Grid Opening Size:**	0.01124
Client Sample #:	16	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	3T 4K	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MICHAEL GORYCKI

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	D9	NSD											
2	J9	11											
3	P9	4											
4	S1	4											

3T / 4K

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_003459963
SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000179558

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1928
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	15	**Grid Opening Size:**	0.01124
Client Sample #:	17	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	4m 0	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MAG

MICHAEL GORYCKI

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	C9	NSD											
2	D9	"											
3	J9	"											
4	E9	"											

4m

40

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_003459964

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC-WTC_000179559

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	Volume (liters):	1928
Lab Group #:	7351	Filter Type / Filter Area:	MCE 385 mm²
Lab Sample #:	16	Grid Opening Size:	0.01124
Client Sample #:	18	Area Examined:	0.04496 mm²
GRID BOX:	1015	Magnification:	20,000
GRID ID:	40 S	Accelerating Voltage:	100 KeV
# Grid Openings:	4	Analysis Date:	4/7/02

Analysis Performed By: MICHAEL GORYCKI

40

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	Q9	NSD											
2	R9	"											
3	I3	"											
4	I3	"											

43

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-WTC_000179560

NYC 9/11 Public Portal Document

TEM Asbestos (air) Count Sheet

Client Name:	NYC BOE	**Volume (liters):**	1920
Lab Group #:	7351	**Filter Type / Filter Area:**	MCE 385 mm²
Lab Sample #:	17	**Grid Opening Size:**	0.01124
Client Sample #:	19	**Area Examined:**	0.04496 mm²
GRID BOX:	1015	**Magnification:**	20,000
GRID ID:	SLN	**Accelerating Voltage:**	100 KeV
# Grid Openings:	4	**Analysis Date:**	4/7/02

Analysis Performed By: MAG
MICHAEL GORYCKI

SL

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	Qg	NSD											
2	Rg	"											
3	Kg	"											
4	Jg	"											

SN

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_003459966
SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008

NYC 9/11 Public Portal Document

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

Page 1 of 1

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

7357 8121 83946-83966

PROJECT INFORMATION

1. Client:	2. Project Name / 2a. Project Address	3. Project #	4. Project Monitor: / 4a. Air Sampler:	4c. Rotameter Number:
NYC - BOE	HS - ECONOMICS + FINANCE / 100 TRINITY PLACE N/M	14584-865	Kevin / FITZPATRICK	SD087

5. Date:	6. Abatement Location:	7. ☐ PCM (0.8 micron MCE)	8. ☒ TEM (0.45 micron MCE)	9. Type:
4-7-02	ENTIRE SCHOOL VARIOUS LOCATIONS	Cassette/Filter Manufacture ____ Lot # ____	Cassette/Filter Manufacture ____ Lot # 00265916	a. ☐ Background b. ☐ Pre-Abate c. ☐ Abatement d. ☐ Post-Abate e. ☐ OSHA f. ☐ Environmental g. ☒ Ambient h. ☐ Other

DAILY AIR SAMPLE RECORD

10. 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. F/CC
01				Field Blank									
02				Field Blank									
03				OUTSIDE of main ENTRANCE of school SIDEWALK NORTH	7 01 AM	01 AM	240	8.0	8.0	8.0	1920		
04				OUTSIDE of COMPUTER ROOM 1ST FLOOR LOBBY.	7 03 AM	03 AM	240	8.0	8.0	8.0	1920		
05				NORTHSIDE OF ROOF AREA	7 05 AM	07 AM	242	8.0	8.0	8.0	1936		
06				7TH FLOOR STAIRWELL 'B' SOUTHSIDE	7 08 AM	08 AM	240	8.0	8.0	8.0	1920		
07				SOUTHSIDE of AUDITORIUM 1ST FLOOR	7 10 AM	10 AM	240	8.0	8.0	8.0	1920		
08				EASTSIDE of CAFETERIA 8TH FLOOR	7 12 AM	13 AM	241	8.0	8.0	8.0	1928		

CHAIN OF CUSTODY

	18. Relinquished By:	19. Received By:	20. Date:	21. Time
I	[signature]	[signature]	4.7.1	4PM
II				
III				

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

22. Lab Name: TEM	23. Date:	24. Time:
a. Analyzed By: MAC	4-7-02	2400
b. QC By:		
c. Lab Batch #:		

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

Analysis Methodology
PCM - NIOSH 7400A
TEM - AHERA

26. ATC Project Manager:	27. Result To: / Beeper/Phone #'s	28. Comments:
MARK TERSIGNI		

WHITE - File YELLOW - Client/Report PINK - Lab GOLDENROD - Field

NY-1 (1/00)

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008 CONFIDENTIAL, CITY_21MC100_00345996?

NYC-WTC_000179562

NYC 9/11 Public Portal Document

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

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

PROJECT INFORMATION

7351

1. Client:	2. Project Name	3. Project #	4. Project Monitor:	4c. Rotameter Number:
NYC - BOE	H.S ECONOMICS Finance	14584-865	Kevin Fitzpatrick	50057
	2a. Project Address 100 TRINITY PLACE NY NY		4a. Air Sampler:	

5. Date:	6. Abatement Location:	7. ☐ PCM (0.8 micron MCE)	8. ☒ TEM (0.45 micron MCE)	9. Type:		
4-7-02	ENTIRE SCHOOL VARIOUS LOCATIONS	Cassette/Filter Manufacture _____ Lot # _____	Cassette/Filter Manufacture _____ Lot # 00262916	a. ☐ Background b. ☐ Pre-Abate	c. ☐ Abatement d. ☐ Post-Abate e. ☐ OSHA	f. ☐ Environmental g. ☒ Ambient h. ☐ Other

DAILY AIR SAMPLE RECORD

10. 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. F/CC
				Field Blank									
				Field Blank									
09				9TH Floor Hallway outside Rm 904.	7:15 AM	11:15 AM	240	8.0	8.0	8.0	1920		
10				8TH Floor classroom TEACHERS Rm 801	7:17 AM	11:17 AM	240	8.0	8.0	8.0	1920		
11				7TH Floor Hallway STAIRWELL "A" SOUTH	7:19 AM	11:19 AM	240	8.0	8.0	8.0	1920		
12				6TH CLASSROOM Rm 608 NORTHSIDE	7:21 AM	11:21 AM	240	8.0	8.0	8.0	1920		
13				5TH Floor Hallway. NEXT TO Rm 503.	7:24 AM	11:25 AM	241	8.0	8.0	8.0	1928		
14				4TH Floor classroom NORTHSIDE 404	7:28 AM	11:29 AM	241	8.0	8.0	8.0	1928		

CHAIN OF CUSTODY

	18. Relinquished By:	19. Received By:	20. Date:	21. Time:
I	Ken Zbytniewski	M.L.	4.7.2	4:20
II				
III				

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

22. Lab Name: TCM	23. Date:	24. Time:
a. Analyzed By: MHB	4-7-02	24:00
b. QC By:		
c. Lab Batch #:		

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

Analysis Methodology
PCM - NIOSH 7400A
TEM - AHERA

26. ATC Project Manager:	27. Result To: _____ Beeper/Phone #'s _____	28. Comments:
MARK TERYESEN		

WHITE - File YELLOW - Client/Report PINK - Lab GOLDENROD - Field

NY-1 (1/00)

SUBJECT TO PROTECTIVE ORDER NO. 2, SEPT. 2008 CONFIDENTIAL, CITY_21MC100_00345996

NYC-WTC_000179563

NYC 9/11 Public Portal Document

AIR MONITORING DATA AND CHAIN OF CUSTODY FORM

TURNAROUND TIME

☐ 2 hrs ☐ 6 hrs ☐ 48 hrs ☐ Standard
☐ 4 hrs ☐ 24 hrs ☐ 72 hrs ☐ Other _____

OJECT INFORMATION 7357

Client:	2. Project Name	3. Project #	4. Project Monitor:	4c. Rotameter Number:
NYC - DOE	2a. Project Address: 100 TRINITY PLACE NY NY	14584-865	4a. Air Sampler:	SX087

Date:	6. Abatement Location:	7. ☐ PCM (0.8 micron MCE)	8. ☒ TEM (0.45 micron MCE)	9. Type:	
		Cassette/Filter Manufacture:	Cassette/Filter Manufacture:	a. ☐ Background	c. ☐ Abatement / f. ☐ Environmental
-7-02	ENTIRE SCHOOL VARIOUS LOCATIONS	Lot #:	Lot #: 002-659116	b. ☐ Pre-Abate	d. ☐ Post-Abate / g. ☒ Ambient
					e. ☐ OSHA / h. ☐ Other

ILY 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. F/CC
				Field Blank									
				Field Blank									
15				3RD FLOOR HALLWAY OUTSIDE OF CLASSROOM 303	7 30 AM	11 31 AM	241	8.0	8.0	8.0	1928		
16				OUTSIDE OF MAIN ENTRANCE SIDEWALK.	11 33 AM	3 33 PM	240	8.0	8.0	8.0	1920		
17				OUTSIDE OF COAT ROOM 1ST FLOOR.	11 35 AM	3 36 PM	241	8.0	8.0	8.0	1928		
18				7TH FLOOR STAIRWELL B SOUTH SIDE	11 37 AM	3 38 PM	241	8.0	8.0	8.0	1928		
19				NORTHWEST ROOF AREA. OPEN BANK	11 39 AM	3 39 PM	240	8.0	8.0	8.0	1920		
20													

HAIN OF CUSTODY

8. Relinquished By:	19. Received By:	20. Date:	21. Time:
[signature]	[signature]	4.6.02	8 PM
II			

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

22. Lab Name: TCM	23. Date:	24. Time:
a. Analyzed By: [signature]	4-7-02	2400
b. QC By:		
c. Lab Batch #:		

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

Analysis Methodology
PCM - NIOSH 7400A
TEM - AHERA

26. ATC Project Manager: TARA TERJESEN

27. Result To: _____
Beeper/Phone #'s _____

28. Comments:

WHITE - File YELLOW - Client/Report PINK - Lab GOLDENROD - Field

NY-1 (1/00)

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

CITY_21MC100_003459969

NYC-WTC_000179564