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:** New Stuyvesant H. S. , 345 Chambers St., NY , NY
Exterior and Interior of Building and Roof

**Received:** 11/25/01 6:00:00 PM

**ATC Group #:** 5974

**Analysis Date:** 11/26/01

## 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 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 5974 -1 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 2 5974 -2 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 3 5974 -3 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 4 5974 -4 | 1952.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 5 5974 -5 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 6 5974 -6 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 7 5974 -7 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 8 5974 -8 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |

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



NYC-WTC_000182760

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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 | 5µ | *Analytical Sensitivity (S/cc)* | *Asbestos Concentration* (S/mm²) | (S/cc) | *Notes* |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 5974 -9 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 10 5974 -10 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 11 5974 -11 | 1928.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 12 5974 -12 | 1928.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 13 5974 -13 | 1936.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 14 5974 -14 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 15 5974 -15 | 1952.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 16 5974 -16 | 1960.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 17 5974 -17 | 1960.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 18 5974 -18 | 1952.00 | 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



NYC-WTC_000182761

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**ATC Group #:** 5974

**Analysis Date:** 11/26/01

## 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 5974 -19 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 20 5974 -20 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |
| 21 5974 -21 | 1944.00 | 0.0450 | 0 | None Detected | 0 | 0 | 0.0044 | <22.24 | <0.0044 | |

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



NYC-WTC_000182762

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1936 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 1 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 1 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5-76 | **Magnification:** | 20,000 |
| **GRID ID:** | 5-7B | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5-A | 1 | NSD | | | | | | | | | | | |
| | 2 | — | | | | | | | | | | | |
| 5-B | 3 | — | | | | | | | | | | | |
| | 4 | — | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101038

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1936 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 2 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 2 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5-76 | **Magnification:** | 20,000 |
| **GRID ID:** | 5-C2 | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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 | >=0.5 µ <5µ | >=5µ | Chrys | Amphibole | Nonasb | Ambig/ND | |
| 5-C | 1 G3 | NSD | | | | | | | | | | | |
| | 2 H3 | — | | | | | | | | | | | |
| | 3 E9 | — | | | | | | | | | | | |
| 5-D | 4 J9 | — | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101039

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1944 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 3 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 3 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5726 | **Magnification:** | 20,000 |
| **GRID ID:** | 5726-D | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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 | Y1 | NSD | | | | | | | | | | | |
| 2 | R1 | — | | | | | | | | | | | |
| 3 | D4 | — | | | | | | | | | | | |
| 4 | U4 | — | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101040

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1952 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 4 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 4 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5 7 6 | **Magnification:** | 20,000 |
| **GRID ID:** | 6 B C | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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 | 51 | NSD | | | | | | | | | | | |
| 6B 2 | 41 | — | | | | | | | | | | | |
| 3 | 03 | — | | | | | | | | | | | |
| 5C 4 | 13 | — | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101041

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1944 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 5 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 5 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 576 | **Magnification:** | 20,000 |
| **GRID ID:** | 6DE | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**Analysis Performed By:** [signature]
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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6D | 1 | D9 | NSD | | | | | | | | | | | |
| | 2 | A9 | — " | | | | | | | | | | | |
| | 3 | A1 | — " | | | | | | | | | | | |
| 5E | 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 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 | | | | | |

CITY_21MC100_003101042

NYC 9/11 Public Portal Document

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1944 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 6 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 6 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 576 | **Magnification:** | 20,000 |
| **GRID ID:** | 7B3 | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Y3 | NSD | | | | | | | | | | | |
| 2 | R3 | — | | | | | | | | | | | |
| 3 | C1 | — | | | | | | | | | | | |
| 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 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_000182768

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1944 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 7 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 7 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5-26 | **Magnification:** | 20,000 |
| **GRID ID:** | 20D | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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 | 1K1 | NSD | | | | | | | | | | | |
| 2 | 1F1 | — " | | | | | | | | | | | |
| 3 | 1F7 | — " | | | | | | | | | | | |
| 4 | 1B7 | — " | | | | | | | | | | | |

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
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M = Matrix
NSD = No Structures Detected

Grid acceptance:

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AMPHIBOLES
Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

## Totals

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

CITY_21MC100_003101044

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1936 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 8 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 8 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 526 | **Magnification:** | 20,000 |
| **GRID ID:** | 7E8A | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | P1 | NSD | | | | | | | | | | | |
| 2 | U1 | — | | | | | | | | | | | |
| 3 | S1 | — | | | | | | | | | | | |
| 4 | 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

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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 | | | | | |

CITY_21MC100_003101045

NYC 9/11 Public Portal Document

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1936 |
| **Lab Group #:** | 5974 | **Filter Type / Filter Area:** | MCE 385 mm² |
| **Lab Sample #:** | 9 | **Grid Opening Size:** | 0.01124 |
| **Client Sample #:** | 9 | **Area Examined:** | 0.04496 mm² |
| **GRID BOX:** | 5 7 6 | **Magnification:** | 20,000 |
| **GRID ID:** | B B C | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B B | 1 Y 7 | NSD | | | | | | | | | | | |
| | 2 R 7 | — " | | | | | | | | | | | |
| | 3 B 7 | — " | | | | | | | | | | | |
| B C | 4 F 7 | — " | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101046

NYC-WTC_000182771

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1936 |
| **Lab Group #:** | 5974 | **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:** | S-26 | **Magnification:** | 20,000 |
| **GRID ID:** | BD-F | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BD | 1 07 | NSD | | | | | | | | | | | |
| | 2 07 | — | | | | | | | | | | | |
| | 3 62 | — | | | | | | | | | | | |
| BF | 4 62 | — | | | | | | | | | | | |

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 | | | | | |

CITY_21MC100_003101047

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1928 |
| **Lab Group #:** | 5974 | **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:** | 5-76 | **Magnification:** | 20,000 |
| **GRID ID:** | 9AB | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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 | |
| 9A | 1 EB | NSD | | | | | | | | | | | |
| | 2 PB | — " | | | | | | | | | | | |
| | 3 E1 | — " | | | | | | | | | | | |
| 9B | 4 J1 | — " | | | | | | | | | | | |

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:

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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 | | | | | |

CITY_21MC100_003101048

# TEM Asbestos (air) Count Sheet

| | | | |
|---|---|---|---|
| **Client Name:** | NYC BOE | **Volume (liters):** | 1928 |
| **Lab Group #:** | 5974 | **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:** | S-26 | **Magnification:** | 20,000 |
| **GRID ID:** | 9CD | **Accelerating Voltage:** | 100 KeV |
| **# Grid Openings:** | 4 | **Analysis Date:** | 11/26/01 |

**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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9C | 1 X 7 | NSD | | | | | | | | | | | |
| | 2 R 7 | — " | | | | | | | | | | | |
| | 3 V 1 | — " | | | | | | | | | | | |
| 9D | 4 S 1 | — " | | | | | | | | | | | |

Struct = > 0.5µ .> 5:1 Aspect Ratio

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√= EDS spectrum conforming to laboratory identification criteria observed

F = Single Fiber
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| AMPHIBOLES |
|---|
| Amosite |
| Crocidolite |
| Anthophyllite |
| Tremolite |
| Actinolite |

## Totals

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

CITY_21MC100_003101049