

**21 WEST STREET**

Block: 15 Lot: 22

BIN: 1000047

11-21 Morris Street, 34-38 Washington Street

**Rose Associates, Inc.**

200 Madison Avenue  
New York, NY 10016-3928  
Direct Line: (212) 210-6772  
Direct Fax: (212) 210-6724  
E-Mail: kbrady@rosenyc.com

Kathleen S. Brady  
Property Manager

February 28, 2002

R. Radhakrishnan  
The City of New York  
Department of Environmental Protection  
59-17 Junction Boulevard  
Corona, NY 11368

Via: **Certified Mail**  
**Fax 718-595-4422**

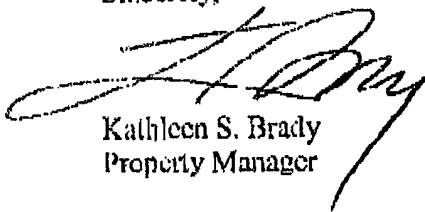
RE: 21 West Street

Dear Mr. Radhakrishnan,

As requested in your letter dated February 23, 2002, I am enclosing reports of the air monitoring tests conducted at 21 West Street subsequent to the September 11, 2001 World Trade Center collapse.

Please contact me if you require further information.

Sincerely,



Kathleen S. Brady  
Property Manager

FROM : LERIVAGE

PHONE NO. : 212 785 6219

Feb. 25 2002 11:44AM P2/2

**Department of  
Environmental  
Protection**59-17 Junction Boulevard  
Corona, New York  
11365-5108West Eden LLC c/o ROS  
200 Madison Avenue  
New York, NY 10016-3903

February 23, 2002

Subject: 21 WEST STREET  
11-21 Morris Street, 34-38 Washington Street  
Second Notice

Robert C. Avaltroni  
Deputy CommissionerBureau of  
Environmental Compliance  
(718) 595-1438  
(718) 595-1432

Dear Sir/ Madam:

This is a follow-up to the NYC DEP request for copies of the environmental hazard assessments including bulk sample results and air monitoring results and a summary of clean-up activities at the above referenced site. To date, our office has not received the requested documents and information. They may be faxed to (718) 393-3744 or sent to the NYC DEP Asbestos Control Program at 59-17 Junction Boulevard, 8<sup>th</sup> floor, Corona, New York 11373-5108.

Please be advised building owners are responsible for the cleaning of building exteriors, grounds, and common areas. Due to changing conditions and continued activity at Ground Zero, building owners should periodically assess the condition of building exteriors and air conditioning systems for cleanliness and may have to periodically re-clean areas. Adherence to proper cleaning methods is important for the protection of public health and the environment. DEP inspectors will be following up on this matter.

If you have any questions, you may reach the Department at (718) 595-3682 during office hours or the 24-hour Help Center at (718) DEP-HELP. DEP staff is available to provide guidance and technical assistance.

Sincerely,

R. Radhakrishnan, P.E.  
Director  
Asbestos Control Program





ENVIRONMENTAL CONSULTANTS, INC

**LETTER OF TRANSMITTAL**

To: Rose Associates, Inc.

Date: 2/20/02

200 Madison Avenue, 5<sup>th</sup> Floor

Project No.: 01-2089

New York, NY 10016

Attention: Ms. Kathy Brady

Reference: 21 West Street, New York, NY

We are sending you herewith ☒ under separate cover ☒☒ Sample Results☐ Contract☐ Insurance Certificates☐ Specifications☐ ACP-5, 7, 9☐ \_\_\_\_\_

For:

☐ Approval☐ Information☐ Your Files☐ Distribution☐ Signature & Return☐ \_\_\_\_\_

Please send us the following:

☐ Sample☐ Shop Drawings☐ Insurance Certificates☐ Plans & Specifications☐ Signature & Return☐ \_\_\_\_\_**REMARKS:**

Sent Via Messenger

Sincerely,

JLC Environmental Consultants, Inc.

Stephen Phara  
Director of Operations



ENVIRONMENTAL CONSULTANTS, INC

October 23, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

---

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 18, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 16 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
JLC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Stephen Pharai", is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

Cc: file: 00-2089-03



ENVIRONMENTAL CONSULTANTS, INC

October 23, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

Attention: Ms. Cathy Brady

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates Inc..

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read "Gulam Machhiwala".

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.  
JLC Project # 01-2089  
October 23, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the fiber content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

FEB-28-2002 THU 11:02 AM CLOSINGS @ ROSE

FAX NO. 212 210 6724

P. 07/42

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/10/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A752

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 001<br>18-October<br>A 8042    | Ambient/ PH Floor/ PH D in the North Section of<br>the Living Room        | 120       | 1846      | 3/100     | <0.001<LOD    |
| 002<br>18-October<br>A 8043    | Ambient/ PH Floor/ Hallway Between PH B and<br>PH C                       | 120       | 1846      | 2/100     | <0.001<LOD    |
| 003<br>18-October<br>A 8044    | Ambient/ 27th Floor/ Room 27 B at the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <0.001<LOD    |
| 004<br>18-October<br>A 8045    | Ambient/ 27th Floor/ Hallway Between Rms 27 D<br>and 27 E                 | 120       | 1846      | 3/100     | <0.001<LOD    |
| 005<br>18-October<br>A 8046    | Ambient/ 22nd Floor/ Rm 22E/ At the North<br>Section of the Living Room   | 120       | 1846      | 3/100     | <0.001<LOD    |
| 006<br>18-October<br>A 8047    | Ambient/ 22nd Floor/ Hallway Between Apt. 22G<br>and 22 H                 | 120       | 1846      | 2/100     | <0.001<LOD    |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
**Gulam Machhiwala**  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 007<br>18-October<br>A 8048    | Ambient/ 20th Floor/ Apt. 20B/ At the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <0.001<LOD    |
| 008<br>18-October<br>A 8049    | Ambient/ 20th Floor/ Hallway Between Apt. 20 G<br>and 20 H                | 120       | 1846      | 4/100     | 0.001<LOD     |
| 009<br>18-October<br>A 8050    | Ambient/ 18th Floor/ Apt. 18E/ At the North<br>Section of the Living Room | 120       | 1846      | 3/100     | <0.001<LOD    |
| 010<br>18-October<br>A 8051    | Ambient/ 18th Floor/ Hallway/ Between Apt. 18I<br>and 18J                 | 120       | 1846      | 4/100     | 0.001<LOD     |
| 011<br>18-October<br>A 8052    | Ambient/ 14th Floor/ Apt. 14G/ At the North<br>Section of the Living Room | 120       | 1846      | 5/100     | 0.001<LOD     |
| 012<br>18-October<br>A 8053    | Ambient/ 14th Floor/ Hallway Between Apt. 14H<br>and 14J                  | 120       | 1846      | 12/100    | <0.003        |

Sample Analysis by:  
 Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2369003  
 Analyte: FIBERS  
 Date Received: 10/18/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A782

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 013<br>18-October<br>A 8054    | Ambient/ 11th Floor/ Apt. 11E/ At the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <0.001<LOD    |
| 014<br>18-October<br>A 8055    | Ambient/ 11th Floor/ Hallway Between Apt. 11H<br>and Apt. 11J             | 120       | 1846      | 2/100     | <0.001<LOD    |
| 015<br>18-October<br>A 8056    | Ambient/ 9th Floor/ Apt. 9C At the North Section o<br>the Living Room     | 120       | 1846      | 2/100     | <0.001<LOD    |
| 016<br>18-October<br>A 8057    | Ambient/ 9th Floor/ Hallway Between Apt. 9H and<br>9J                     | 120       | 1846      | 6/100     | 0.002         |
| 017<br>18-October<br>A 8058    | Ambient/ 8th Floor/ Apt. 8E/ At the North Section<br>of the Living Room   | 120       | 1846      | 5/100     | 0.001<LOD     |
| 018<br>18-October<br>A 8059    | Ambient/ 8th Floor/ Hallway Between Apt. 8H and<br>8J                     | 120       | 1846      | 7/100     | 0.002         |

#### Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

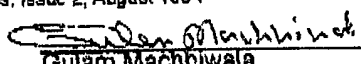
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.F. (High Concentration of Particles)  
 VOID2 = Overloaded

#### Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

#### Instrumentation:

Olympus PCM Model BH-2 with Walton-Bockett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
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 Phone: (212) 420-8119 Fax: (212) 420-8092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                  | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|-------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 019<br>18-October<br>A 8060    | Ambient/ 6th Floor/ Apt. 6M At the North Section<br>of the Apt.         | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 020<br>18-October<br>A 8061    | Ambient/ 6th Floor/ Hallway Between Apt. 6E and<br>6F                   | 120       | 1846      | 16/100    | <u>0.004</u>            |
| 021<br>18-October<br>A 8062    | Ambient/ 3rd Floor/ Apt. 3F/ At the North Section<br>of the Living Room | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 022<br>18-October<br>A 8063    | Ambient/ 3rd Floor/ Hallway/ At the Entrance to<br>the Laundry Room     | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 023<br>18-October<br>A 8064    | Ambient/ Lobby/ At the Entrance to the Mail Room                        | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 024<br>18-October<br>A 8065    | Ambient/ Lobby/ At the Entrance to the Clock<br>Room                    | 120       | 1846      | 14/100    | <u>0.004</u>            |

Sample Analysis by:  
 Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. (High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0116A782

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-----------|---------------|
|--------------------------------|------------------------|-----------|-----------|-----------|---------------|

|     |             |  |  |  |       |
|-----|-------------|--|--|--|-------|
| 026 | FIELD BLANK |  |  |  | 0/100 |
|-----|-------------|--|--|--|-------|

18-October  
 A 8066

|     |             |  |  |  |       |
|-----|-------------|--|--|--|-------|
| 026 | FIELD BLANK |  |  |  | 0/100 |
|-----|-------------|--|--|--|-------|

18-October  
 A 8067

#### Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 6.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

#### Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

#### Instrumentation:

Olympus PCM Model RH-2 with Walton-Beckett Graticule (100um field diameter)

  
**Gulam Machhiwala**  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

November 8, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 24, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESI IAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
JLC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Stephen Pharai", is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

cc: file: 00-2089-04



ENVIRONMENTAL CONSULTANTS, INC

November 8, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10010

Attention: Ms. Cathy Brady

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

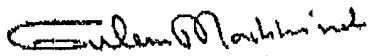
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After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

  
Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.

JLC Project # 01-2089004

November 8, 2001

page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus RH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

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Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01 2080004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                 | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 001<br>24-October<br>A 8304    | Ambient/ PH Floor/ PH D in the North Section of the Living Room        | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 002<br>24-October<br>A 8305    | Ambient/ PH Floor/ Hallway Between PH B and PH C                       | 120       | 1846      | 6/100     | <u>0.002</u>            |
| 003<br>24-October<br>A 8306    | Ambient/ 27th Floor/ Rm 27B at the North Section of the Living Room    | 120       | 1846      | 5/100     | <u>0.001&lt;LOD</u>     |
| 004<br>24-October<br>A 8307    | Ambient/ 27th Floor/ Hallway Between Apt. 27D and 27 E                 | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 005<br>24-October<br>A 8308    | Ambient/ 22nd Floor/ Apt. 22K/ At the North Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 006<br>24-October<br>A 8309    | Ambient/ 22nd Floor/ Hallway Between Apt 22G and 22H                   | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |

#### Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

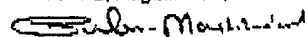
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

#### Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

#### Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: November 8, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs for the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(/cc)            |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 007<br>24-October<br>A 8310    | Ambient/ 20th Floor/ Apt 20B/ At the North<br>Section of the Living Room  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 008<br>24-October<br>A 8311    | Ambient/ 20th Floor/ Halfway Between Apt 20G<br>and 20H                   | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 009<br>24-October<br>A 8312    | Ambient/ 18th Floor/ Apt. 18H/ At the North<br>Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 010<br>24-October<br>A 8313    | Ambient/ 18th Floor/ Halfway Between Apt. 18i<br>and 18J                  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 011<br>24-October<br>A 8314    | Ambient/ 14th Floor/ Apt. 14G/ At the North<br>Section of the Living Room | 120       | 1846      | 1/100     | <u>&lt;0.001&lt;LOD</u> |
| 012<br>24-October<br>A 8315    | Ambient/ 14th Floor/ Halfway Between Apt. 14H<br>and 14J                  | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: November 8, 2001

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 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                 | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 013<br>24-October<br>A 8316    | Ambient/ 11th Floor/ Apt. 11C/ At the North Section of the Living Room | 120       | 1846      | 6/100     | <u>0.002</u>            |
| 014<br>24-October<br>A 8317    | Ambient/ 11th Floor/ Hallway Between Apt. 11H and 11J                  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 015<br>24-October<br>A 8313    | Ambient/ 9th Floor/ Apt. 9N/ At the North Section of the Living Room   | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 016<br>24-October<br>A 8314    | Ambient/ 9th Floor/ Hallway Between Apt. 9H and 9J                     | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 017<br>24-October<br>A 8320    | Ambient/ 8th Floor/ Apt. 8E/ At the North Section of the Living Room   | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 018<br>24-October<br>A 8321    | Ambient/ 8th Floor/ Hallway Between Apt. 8H and 8J                     | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = I.O.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Makhani  
 Laboratory Director

Report Date: November 8, 2001

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FAX NO. 212 210 6724

P. 18/42

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Rose Associates Inc.  
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ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                               | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|----------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 019<br>24-October<br>A 8322    | Ambient/ 6th Floor/ Apt. 6M/ At the North Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 020<br>24-October<br>A 8323    | Ambient/ 6th Floor/ Hallway Between Apt. 6E and 6F                   | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 021<br>24-October<br>A 8324    | Ambient/ 3rd Floor/ Apt. 3F At the North Section of the Living Room  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 022<br>24-October<br>A 8325    | Ambient/ 3rd Floor/ Hallway at the Entrance of the Laundry Room      | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 023<br>24-October<br>A 8326    | Ambient/ Lobby/ At the Entrance to the Clock Room                    | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 024<br>24-October<br>A 8327    | Ambient/ Lobby/ At the Entrance to the Mail Room                     | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |

Sample Analysis by:  
 Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 - H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 With Walton-Beckett Graticule (100um field diameter).

  
**Gulam Machhiwala**  
 Laboratory Director

Report Date: November 8, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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Rosen Associates Inc.  
200 Madison Ave. 6th Floor  
New York, NY 10016

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2069004  
Analyte: FIBERS  
Date Received: 10/25/2001  
Date Analyzed: 10/25/2001  
Batch #: 0110A824

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-------------------------|
| 025<br>24-October<br>A 8328    | FIELD BLANK            |           |           | 0/100                   |
| 026<br>24-October<br>A 8329    | FIELD BLANK            |           |           | 0/100                   |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
VOID1 = H.C.P. ( High Concentration of Particles)  
VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
Gulam Machhiwala  
Laboratory Director

Report Date: November 8, 2001

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ENVIRONMENTAL CONSULTANTS, INC

October 16, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

Attention: Ms. Cathy Brady

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates Inc..

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read "Gulam Machhiwala".

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.

JLC Project # 01-2089002

October 16, 2001

page 2

### **Air Sampling Analysis and Procedure**

#### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

#### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

#### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

#### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

#### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

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 200 Madison Ave. 8th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIIA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2086002  
 Analyte: FIBERS  
 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                              | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|-------------------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 001<br>12-October<br>A 7513    | Ambient/ Corridor/ 30th Floor/ Right Next to the Entrance of Apartment 30C          | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 002<br>12-October<br>A 7514    | Ambient/ Inside/ 30th Floor/ Inside Apartment 30B/ At the North Section of the Room | 90        | 1385      | 7/100     | <u>0.002</u>  |
| 003<br>12-October<br>A 7515    | Ambient/ Corridor/ 25th Floor/ At the North Section of the Corridor                 | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 004<br>12-October<br>A 7516    | Ambient/ Corridor/ 25th Floor/ At the South Section of the Corridor                 | 90        | 1385      | 8/100     | <u>0.003</u>  |
| 005<br>12-October<br>A 7517    | Ambient/ 20th Floor/ At the North Section of the Apartment 20B                      | 90        | 1385      | 7/100     | <u>0.003</u>  |
| 006<br>12-October<br>A 7518    | Ambient/ 20th Floor/ At the South Section of the Corridor                           | 90        | 1385      | 8/100     | <u>0.003</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

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 NYLAP Lab Code: 101953

Project No.: 01-2069002  
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 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                 | TIME(mln) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 007<br>12-October<br>A 7510    | Ambient/ 15th Floor/ Corridor/ At the North<br>Section of the Corridor | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 008<br>12-October<br>A 7520    | Ambient/ 15th Floor/ At the South Section of the<br>Corridor           | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 009<br>12-October<br>A 7521    | Ambient/ 10th Floor/ At the North Section of the<br>Hallway            | 90        | 1385      | 7/100     | <u>0.002</u>  |
| 010<br>12-October<br>A 7522    | Ambient/ 10th Floor/ At the South Section of the<br>Hallway            | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 011<br>12-October<br>A 7523    | Ambient/ 9th Floor/ At the North Section of the<br>Hallway             | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 012<br>12-October<br>A 7524    | Ambient/ 9th Floor/ At the South Section of the<br>Hallway             | 90        | 1385      | 5/100     | <u>0.002</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
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 Laboratory Director

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**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                          | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|-----------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 013<br>12-October<br>A 7523    | Ambient/ 8th Floor/ At the North Section of the Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 014<br>12-October<br>A 7526    | Ambient/ 8th Floor/ At the South Section of the Hallway         | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 015<br>12-October<br>A 7527    | Ambient/ 7th Floor/ At the North Section of the Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 016<br>12-October<br>A 7528    | Ambient/ 7th Floor/ At the South Section of the Hallway (South) | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 017<br>12-October<br>A 7529    | Ambient/ 6th Floor/ At the South Section of the Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 018<br>12-October<br>A 7530    | Ambient/ 8th Floor/ At the North Section of the Hallway         | 90        | 1385      | 5/100     | <u>0.002</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

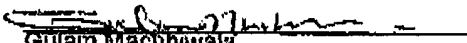
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
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### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                      | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|-----------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 019<br>12-October<br>A 7531    | Ambient/ 5th Floor/ In Room 5N/ At the Bedroom<br>Section Beside the Window | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 020<br>12-October<br>A 7532    | Ambient/ 5th Floor/ Corridor/ At the North Section<br>of the Corridor       | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 021<br>12-October<br>A 7533    | Ambient/ In the Lobby/ Next to the Mailroom                                 | 90        | 1385      | 3/100     | <u>0.001</u>  |
| 022<br>12-October<br>A 7534    | Ambient/ In the Lobby/ Next to the Gym                                      | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 023<br>12-October<br>A 7535    | Ambient/ At the North Section of the PH Corridor                            | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 024<br>12-October<br>A 7536    | Ambient/ At the South Section of the PH Room D                              | 90        | 1385      | 4/100     | <u>0.001</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

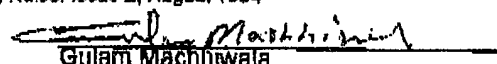
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
**Gulam Machhiwala**  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
200 Park Avenue South, Suite 1001, New York, New York 10003  
Phone: (212) 420-8119 Fax: (212) 420-8082

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2089002  
Analyte: FIBERS  
Data Received: 10/15/01  
Date Analyzed: 10/16/01  
Batch #: 0110A741

**SUMMARY OF ANALYTICAL RESULTS**

Site:

21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIBER/FIELD RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|---------------------------|
| 025<br>12-October<br>A 7537    | FIELD BLANK            |           |           | 0/100                     |
| 026<br>12-October<br>A 7538    | FIELD BLANK            |           |           | 0/100                     |

Sample Analysis by:  
Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
VOID1 = H.C.P. ( High Concentration of Particles)  
VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Bockett Graticule (100um field diameter).

  
Gulam Machhiwala  
Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

October 6, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 5, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
JLC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Stephen Pharai", is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

Cc: file: 00-2089



ENVIRONMENTAL CONSULTANTS, INC

October 6, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

JLC Environmental Consultants, Inc.

A handwritten signature in black ink, reading "Gulam Machhiwala". The signature is fluid and cursive, with a long horizontal stroke at the end.

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089  
October 6, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

FEB-28-2002 THU 11:15 AM CLOSINGS @ ROSE

FAX NO. 212 210 6724

P. 30/42

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8118 Fax: (212) 420-6092

Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NYLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A888

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                           | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 001<br>05-October<br>A 6935    | Ambient/ Corridor/ 30th Floor/ Between Apt. 30D and Laundry Room | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 002<br>05-October<br>A 6930    | Ambient/ Corridor/ 30th Floor/ Next to Stair B.                  | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 003<br>05-October<br>A 6937    | Ambient/ Corridor/ 25th Floor/ Next to Apt. 25D                  | 120       | 1837.8    | 5/100     | <u>0.001</u>  |
| 004<br>05-October<br>A 6938    | Ambient/ Corridor/ 25th Floor/ Next to Apt. 25A                  | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 005<br>05-October<br>A 6939    | Ambient/ Corridor/ 20th Floor/ Between Elevator and Service Room | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 006<br>05-October<br>A 6940    | Ambient/ 20th Floor/ Corridor/ Next to Apt. 20H                  | 120       | 1837.8    | 3/100     | <u>0.001</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BM-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
200 Park Avenue South, Suite 1001, New York, New York 10003  
Phone: (212) 420-8118 Fax: (212) 420-8092

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2089  
Analyte: FIBERS  
Date Received: 10/5/2001  
Date Analyzed: 10/5/2001  
Batch #: 0110A688

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                      | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|-------------------------------------------------------------|-----------|-----------|-----------|---------------|
| Q07<br>05-October<br>A 6941    | Ambient/ 15th Floor/ Corridor/ Between Apts. 15J<br>& 15K   | 120       | 1837.8    | 5/100     | <u>0.001</u>  |
| Q08<br>05-October<br>A 6942    | Ambient/ 15th Floor/ Corridor/ Between Stairs &<br>Apt. 15A | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| Q09<br>05-October<br>A 6943    | Ambient/ 10th Floor/ Corridor/ Between Apts. 10L<br>& 10M   | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| Q10<br>05-October<br>A 6944    | Ambient/ 10th Floor/ Corridor/ Below Apt.<br>Direction Sign | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| Q11<br>05-October<br>A 6945    | Ambient/ PH Fl. Corridor                                    | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| Q12<br>05-October<br>A 6946    | Ambient/ PH Fl. Corridor                                    | 120       | 1837.8    | 3/100     | <u>0.001</u>  |

Sample Analysis by:

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

  
William Machinwala  
Laboratory Director

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analysis.

FEB-28-2002 THU 11:16 AM CLOSINGS @ ROSE

FAX NO. 212 210 6724

P. 32/42

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
200 Park Avenue South, Suite 1001, New York, New York 10003  
Phone: (212) 420-8119 Fax: (212) 420-6092

Ruse Associates  
200 Madison Avenue  
New York, NY 10016-3901

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2089  
Analyte: FIBERS  
Date Received: 10/5/2001  
Date Analyzed: 10/5/2001  
Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                 | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|----------------------------------------|-----------|-----------|-----------|---------------|
| 013<br>05-October<br>A 6947    | Ambient/ 5th Floor Corridor            | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 014<br>06-October<br>A 6948    | Ambient/ 5th Floor Corridor            | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 015<br>05-October<br>A 6949    | Ambient/ Lobby Next to Mail Room       | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 016<br>05-October<br>A 6950    | Ambient/ Lobby Gym                     | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 017<br>05-October<br>A 6951    | Ambient/ Apt. 11C/ Hallway By Bathroom | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 018<br>05-October<br>A 6952    | Ambient/ Apt. 11C/ Children Room       | 120       | 1837.8    | 4/100     | <u>0.001</u>  |

Sample Analysis by:  
Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
VOID1 = H.C.P. ( High Concentration of Particles)  
VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model DI-2 with Walton-Deckett Graticule (100um field diameter).

  
Guilan Machinwala  
Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-8092

Basin Associates  
 200 Madison Avenue  
 New York, NY 10018-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/6/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|---------------------------------------|-----------|-----------|-----------|---------------|
| 019<br>05-October<br>A 6953    | Ambient/ Apt. 3H/ Back Bedroom        | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 020<br>05-October<br>A 6954    | Ambient/ Apt. 3H/ Hall By Bathroom    | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 021<br>05-October<br>A 6955    | Ambient/ Apt. 17H                     | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 022<br>06-October<br>A 6956    | Ambient/ Apt. 17H                     | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 023<br>05-October<br>A 6957    | Ambient/ PHC/ 2nd Level Bedroom       | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 024<br>06 October<br>A 6958    | Ambient/ PHC/ 2nd Level Bathroom Area | 120       | 1837.8    | 2/100     | <u>0.001</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model RH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

FEB-28-2002 THU 11:17 AM CLOSINGS @ ROSE

FAX NO. 212 210 6724

P. 34/42

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3001

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-------------------------|
| Q25<br>05-October<br>A 8959    | FIELD BLANK            |           |           | 0/100                   |
| Q26<br>05-October<br>A 8960    | FIELD BLANK            |           |           | 0/100                   |
| Q27<br>05-October<br>A 8961    | FIELD BLANK            |           |           | 0/100                   |
| Q28<br>05-October<br>A 8962    | FIELD BLANK            |           |           | 0/100                   |
| Q29<br>05-October<br>A 8963    | FIELD BLANK            |           |           | 0/100                   |
| Q30<br>06-October<br>A 8964    | FIELD BLANK            |           |           | 0/100                   |

Sample Analysis by:  
 Positive Phase Contrast Microscopy (PCM)

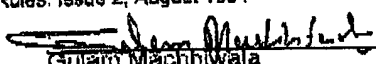
<LOD = Less than limit of detection which is 5.8 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

September 24, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on September 17, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. On September 18, 2001 some of the samples were submitted for analysis using the Transmission Electron Microscopy Method NIOSH 7402. The analytical results of the air samples using both the PCM and TEM methods indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
JLC Environmental Consultants, Inc.

A handwritten signature in black ink, appearing to read "Stephen Pharai", is written over a circular stamp or logo.

Stephen Pharai  
Director of Operations

Cc: file: 00-2009



ENVIRONMENTAL CONSULTANTS, INC

September 18, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

JLC Environmental Consultants, Inc.

A handwritten signature in dark ink, appearing to read "Al Wallner".

Al Wallner  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089  
September 18, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-8092

Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 9/17/01  
 Date Analyzed: 9/18/01  
 Batch #: 0109A629

**SUMMARY OF ANALYTICAL RESULTS**

Silo: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                  | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|-----------------------------------------|-----------|-----------|-----------|-------------------------|
| 001<br>17-September<br>A 6223  | Ambient/ Apartment #3E/ Bedroom - North | 120       | 1847      | 5/100     | <u>0.001&lt;LOD</u>     |
| 002<br>17-September<br>A 6224  | Ambient/ Hallway/ @ Apartment #3E       | 120       | 1847      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 003<br>17-September<br>A 6225  | Ambient/ Hallway/ By Apartment #9L      | 120       | 1847      | 14/100    | <u>0.004</u>            |
| 004<br>17-September<br>A 6226  | Ambient/ Apartment #9L/ Bedroom         | 120       | 1847      | 65/100    | <u>0.017</u>            |
| 005<br>17-September<br>A 6227  | Ambient/ Apartment #22K/ Bedroom        | 120       | 1847      | 50/100    | <u>0.013</u>            |
| 006<br>17-September<br>A 6228  | Ambient/ Hallway/ By Apartment #22K     | 120       | 1847      | 51/100    | <u>0.014</u>            |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticules (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

  
 AT Wallner  
 Laboratory Director

Report Date: September 18,  
 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
200 Park Avenue South, Suite 1001, New York, New York 10003  
Phone: (212) 420 8119 Fax: (212) 420-6092

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2089  
Analyte: FIBERS  
Date Received: 9/17/01  
Date Analyzed: 9/18/01  
Batch #: 0109A629

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-------------------------|
| 007<br>17-September<br>A 6229  | FIELD BLANK            |           |           | 0/100                   |
| 008<br>17-September<br>A 0230  | FIELD BLANK            |           |           | 0/100                   |

#### Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

#### Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules, Issue 2, August 1994

#### Instrumentation:

Olympus PCM Model DH 2 with Walton-Beckett Graticule (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
VOID1 = H.C.P. (High Concentration of Particles)  
VOID2 = Overloaded

AI Walmer   
Laboratory Director

Report Date: September 18,  
2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

September 19, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results of the building materials inspection conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

According to procedure, samples were placed in double plastic bags at the site location and transported to the JLC laboratory. Upon arrival, the samples were individually prepared and identified as friable or non-friable and then analyzed and indexed by date of collection, receipt, and analysis, as well as location, color, total estimated percentage of asbestos, and type(s) and estimated percentage(s) of each asbestos fiber group and non-asbestos fiber groups.

The detailed protocol for friable bulk material sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Polarized Light Microscopy, and Analytical Results. These sections should clarify most questions concerning the results and documentation for this project.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any further questions. We look forward to working with you again in the

Sincerely,

JLC Environmental Consultants, Inc.

  
Al Wallner  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089

page 2

### **Bulk Building Materials Analysis and Procedure**

#### **Introduction**

Polarized light microscopy with dispersion staining (PLM-DS) is the most efficient method for detecting asbestos in bulk samples. It is this method that the JLC lab uses during bulk building material analyses.

#### **Methodology**

A chain of custody is kept for each sample to ensure proper handling and delivery to the JLC lab prior to analysis. To avoid any possible contamination, all sample and slide preparation is carried out in a ventilated, HEPA-filter hood with continuous airflow. Sample analysis is performed using PLM-DS in accordance with the USEPA, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600 R-93 116, July 1993, and NYDOH-ELAP certification manual, "Polarized Light Microscope Methods for Identifying and Quantitating Asbestos in Bulk Samples," ELAP 198.1, October 1993.

#### **Analytical Procedures**

All samples are subject to preliminary visual stereomicroscopic examination. Observation of homogeneity, fiber identification, and semi-quantitation of constituents can be made at this point. Samples lacking uniformity of composition and/or distribution of component materials then undergo homogenization. Some non-friable organically bound (NOB) samples such as floor tiles and roofing materials may require additional steps to dislodge problem matrices (i.e. ashing, extractions, and TEM).

Identification of suspect fibers is made by PLM analysis of subsamples. A microscope equipped with dual polarizing filters enables us to observe specific optical characteristics of each sample. Positive identification of asbestos requires determination of the following optical properties: morphology, color and pleochroism, refractive indices, birefringence, extinction characteristics, and signs of elongation.

Asbestos quantitation is performed by point-counting procedure, a standard technique in petrography for determining the relative areas occupied by separate minerals in rock. An ocular reticle superimposes a point or points over the microscope's field of view. The number of points positioned directly above each kind of particle or fiber is recorded. A total of 400 points must be counted over at least eight different representative subsamples to complete analysis.

#### **Polarized Light Microscopy**

JLC uses an Olympus BHT-P Polarizing Microscope complete with polarizer, analyzer, port for wave retardation plate, 360 degree graduated rotating stage, substage condenser, lamp and lamp iris, eyepiece reticle, and 25 point Chalkley Point Array. Plane polarized light allows for the determination of refraction indices relative to specific crystallographic orientations. Morphology and color can also be observed under plane polarized light. Observation of particles or fibers while oriented between polarizing filters whose privileged vibration directions are perpendicular allows for determination of isotropism/ anisotropism, extinction characteristics of anisotropic particles, and calculation of birefringence. A retardation plate may be placed in the polarized light path for verification of signs of elongation.

#### **Analytical Results**

The "Summary of Analytical Results" represents the results of analysis. Positive results mean the sample is asbestos or contains more than one percent asbestos by weight. The results are generally sufficient for identification and quantitation of major concentrations of asbestos. However, it may be found that additional techniques may be necessary. Please be aware that PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. Before the material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative Transmission Electron Microscopy (TEM).

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
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Phone: (212) 420-8119 Fax: (212) 420-6082

Rosa Associates  
200 Marison Avenue  
New York, NY 10010-3901

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101853

Project No.: 01-2089  
Analyte: ASBESTOS  
Date Received: 9/19/01  
Date Analyzed: 9/19/01  
Batch #: 0109B370

### SUMMARY OF ANALYTICAL RESULTS - PLM

Site: 21 West Street, New York, NY

| SAMPLE #                        | DESCRIPTION / LOCATION                    | COLOR | ASBESTOS DETECTED? | TOTAL % OF ASBESTOS | CONSTITUENTS                     |
|---------------------------------|-------------------------------------------|-------|--------------------|---------------------|----------------------------------|
| DATE COLLECTED                  |                                           |       |                    |                     |                                  |
| LAB #                           |                                           |       |                    |                     |                                  |
| CLIENT'S SAMPLE #               |                                           |       |                    |                     |                                  |
| 001<br>9/18/01<br>10469         | Apartment 9L/ Window Sill/ Sample of Dust | TAN   | NO                 | 0%                  | CELL 20%<br>FBGL 65%<br>NFIB 15% |
| 001A<br>002<br>9/18/01<br>10469 | Apartment 22K/ TV Stand/ Sample of Dust   | TAN   | NO                 | 0%                  | CELL 20%<br>FBGL 65%<br>NFIB 15% |
| 002B<br>003<br>9/18/01<br>10470 | Apartment 3E/ Desk/ Sample of Dust        | TAN   | NO                 | 0%                  | CELL 15%<br>FBGL 70%<br>NFIB 15% |
| 003C                            |                                           |       |                    |                     |                                  |

#### INSUFFICIENT MATERIAL SUBMITTED

#### TEM RECOMMENDED

#### NOT ANALYZED POSITIVE STOP

#### Sample Analysis by:

Polarized Light Microscopy-Dispersion Staining (PLM-DS)

#### Method of Sample Preparation and Analysis:

All samples were prepared and analyzed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials" USEPA/600/R-03/116, July 1993.

#### Instrumentation:

Olympus PLM, Model BH-2VM Stereomicroscope, Model VM2 1x-4x

#### ASBESTOS CONSTITUENTS

CHRY = Chrysotile Asbestos  
AMOS = Amosite Asbestos  
CRNC = Crocidolite Asbestos  
ACTN = Actinolite Asbestos  
TREM = Tremolite Asbestos  
ANTH = Anthophyllite Asbestos

#### NON-ASBESTOS CONSTITUENTS

PAPF = Paper Fiber  
MINW = Mineral Wool  
FBGL = Fiberglass  
SYNF = Synthetic Fibers  
CELL = Cellulose  
NFIB = Non-Fibrous  
ORGM = Organic Material  
WOLL = Wollastonite  
HSMH = Horse Hair  
OTHR = Other

  
Al Wallner  
Laboratory Director

Analytical results reflect the make up of the materials only in the areas sampled. This "Summary of Analytical Results" shall not be reproduced except in full, without the written approval of JLC Laboratory, and it must not be used by client to claim product endorsement by NVLAP or any agency of the U.S. Government. This method is not applicable to samples containing large amounts of fine fibers below the resolution of the light microscope. The value of this method is limited to the quantitative identification of asbestos and the semi-quantitative determination of asbestos content of bulk samples, expressed as a percentage of the protected area. Quantification of asbestos content was determined with a visual volume estimate, a calibrated visual area estimate, and/or point counting procedure. CAUTION: Other fibers with optical properties similar to asbestos may give positive interferences and will be considered asbestos under this methodology. Also, PLM is not consistently reliable in identifying asbestos in floor coverings and similar non-fibrous organically-bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.



**Rose Associates, Inc.**

200 Madison Avenue  
New York, NY 10016-3998

Adam R. Rose  
President

21 West St

September 24, 2001

Dear Resident,

We are very pleased to have you back home at Le Rivage. As you probably know, the staff at 21 West Street performed exceptionally under very difficult circumstances, and we are all very grateful to them for protecting the building and your homes and pets. Gus Flores literally slept in the lobby to monitor access, and Flo, Alex, Robert and Miguel all stayed with Le Rivage around the clock to assist. The entire staff is made up of wonderful and caring people and we want to acknowledge them.

Le Rivage has been extensively inspected by structural engineers, and it is in perfect structural condition. In addition, all building systems have been checked and serviced. Le Rivage is fully operational.

As you have heard, asbestos levels in the Financial District have been very low. Our tests by certified inspectors confirm that the building is safe for occupancy. In addition, the building has been cleaned from top to bottom including apartment interiors.

To thank you for your patience during this unfortunate period we are waiving all rent from September 11, 2001 to September 30, 2001. To assist you with your cleaning expenses, all washers and dryers in Le Rivage will operate without charge until October 11, 2001.

Once again, we welcome you home, and thank you for your understanding. We will do everything within our power to make you comfortable.

Sincerely,

Adam R. Rose



**Rose Associates, Inc.**

200 Madison Avenue  
New York, NY 10016-3998  
Direct Line: (212) 210-6772  
Direct Fax: (212) 210-6724  
E-Mail: kbrady@rosenyc.com

Kathleen S. Brady  
Property Manager

February 28, 2002

R. Radhakrishnan  
The City of New York  
Department of Environmental Protection  
59-17 Junction Boulevard  
Corona, NY 11368

**Via: Certified Mail**  
**Fax 718-595-4422**

RE: 21 West Street

Dear Mr. Radhakrishnan,

As requested in your letter dated February 23, 2002, I am enclosing reports of the air monitoring tests conducted at 21 West Street subsequent to the September 11, 2001 World Trade Center collapse.

Please contact me if you require further information.

Sincerely,

A handwritten signature in black ink, appearing to read 'K. Brady', is written over the typed name and title. The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Kathleen S. Brady  
Property Manager

FROM : LERIVAGE

PHONE NO. : 212 785 6219

Feb. 25 2002 11:44AM P2/2

**Department of  
Environmental  
Protection**59-17 Junction Boulevard  
Corona, New York  
11368-5107**Joel A. Miele Sr., P.E.****Robert C. Avaltroni  
Deputy Commissioner****Bureau of  
Environmental Compliance**Tel: (718) 595-4418  
Fax: (718) 595-4422West Eden LLC c/o ROS  
200 Madison Avenue  
New York, NY 10016-3903

February 23, 2002

**Subject: 21 WEST STREET  
11-21 Morris Street, 34-38 Washington Street  
Second Notice**

Dear Sir/ Madam:

This is a follow-up to the NYC DEP request for copies of the environmental hazard assessments including bulk sample results and air monitoring results and a summary of clean-up activities at the above referenced site. To date, our office has not received the requested documents and information. They may be faxed to (718) 595-3744 or sent to the NYC DEP Asbestos Control Program at 59-17 Junction Boulevard, 8<sup>th</sup> floor, Corona, New York 11373-5108.

Please be advised building owners are responsible for the cleaning of building exteriors, grounds, and common areas. Due to changing conditions and continued activity at Ground Zero, building owners should periodically assess the condition of building exteriors and air conditioning systems for cleanliness and may have to periodically re-clean areas. Adherence to proper cleaning methods is important for the protection of public health and the environment. DEP inspectors will be following up on this matter.

If you have any questions, you may reach the Department at (718) 595-3682 during office hours or the 24-hour Help Center at (718) DEP-HELP. DEP staff is available to provide guidance and technical assistance.

Sincerely,

**R. Radhakrishnan, P.E.  
Director  
Asbestos Control Program**

(718) DEP-HELP



ENVIRONMENTAL CONSULTANTS, INC

## LETTER OF TRANSMITTAL

To: Rose Associates, Inc.

200 Madison Avenue, 5<sup>th</sup> Floor

New York, NY 10016

Date: 2/20/02

Project No.: 01-2089

Attention: Ms. Kathy Brady

Reference: 21 West Street, New York, NY

We are sending you herewith ☒ under separate cover ☒

☒ Sample Results

☐ Contract

☐ Insurance Certificates

☐ Specifications

☐ ACP-5, 7, 9

☐ \_\_\_\_\_

For:

☐ Approval

☐ Information

☐ Your Files

☐ Distribution

☐ Signature & Return

☐ \_\_\_\_\_

Please send us the following:

☐ Sample

☐ Shop Drawings

☐ Insurance Certificates

☐ Plans & Specifications

☐ Signature & Return

☐ \_\_\_\_\_

### REMARKS:

Sent Via Messenger

Sincerely,

**JLC Environmental Consultants, Inc.**

Stephen Pharai

Director of Operations



ENVIRONMENTAL CONSULTANTS, INC

October 23, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

---

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 18, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read 'Stephen Pharai', is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

Cc: file: 00-2089-03



October 23, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

Attention: Ms. Cathy Brady

---

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates Inc..

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read 'Gulam Machhiwala', is written over a horizontal line.

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.  
JLC Project # 01-2089  
October 23, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

---

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 001<br>18-October<br>A 8042    | Ambient/ PH Floor/ PH D in the North Section of<br>the Living Room        | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 002<br>18-October<br>A 8043    | Ambient/ PH Floor/ Hallway Between PH B and<br>PH C                       | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 003<br>18-October<br>A 8044    | Ambient/ 27th Floor/ Room 27 B at the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 004<br>18-October<br>A 8045    | Ambient/ 27th Floor/ Hallway Between Rms 27 D<br>and 27 E                 | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 005<br>18-October<br>A 8046    | Ambient/ 22nd Floor/ Rm 22E/ At the North<br>Section of the Living Room   | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 006<br>18-October<br>A 8047    | Ambient/ 22nd Floor/ Hallway Between Apt. 22G<br>and 22 H                 | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 007<br>18-October<br>A 8048    | Ambient/ 20th Floor/ Apt. 20B/ At the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 008<br>18-October<br>A 8049    | Ambient/ 20th Floor/ Hallway Between Apt. 20 G<br>and 20 H                | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 009<br>18-October<br>A 8050    | Ambient/ 18th Floor/ Apt. 18E/ At the North<br>Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 010<br>18-October<br>A 8051    | Ambient/ 18th Floor/ Hallway/ Between Apt. 18I<br>and 18J                 | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 011<br>18-October<br>A 8052    | Ambient/ 14th Floor/ Apt. 14G/ At the North<br>Section of the Living Room | 120       | 1846      | 5/100     | <u>0.001&lt;LOD</u>     |
| 012<br>18-October<br>A 8053    | Ambient/ 14th Floor/ Hallway Between Apt. 14H<br>and 14J                  | 120       | 1846      | 12/100    | <u>&lt;0.003</u>        |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

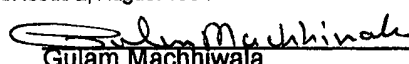
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 013<br>18-October<br>A 8054    | Ambient/ 11th Floor/ Apt. 11E/ At the North<br>Section of the Living Room | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 014<br>18-October<br>A 8055    | Ambient/ 11th Floor/ Hallway Between Apt. 11H<br>and Apt. 11J             | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 015<br>18-October<br>A 8056    | Ambient/ 9th Floor/ Apt. 9C At the North Section o<br>the Living Room     | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 016<br>18-October<br>A 8057    | Ambient/ 9th Floor/ Hallway Between Apt. 9H and<br>9J                     | 120       | 1846      | 6/100     | <u>0.002</u>            |
| 017<br>18-October<br>A 8058    | Ambient/ 8th Floor/ Apt. 8E/ At the North Section<br>of the Living Room   | 120       | 1846      | 5/100     | <u>0.001&lt;LOD</u>     |
| 018<br>18-October<br>A 8059    | Ambient/ 8th Floor/ Hallway Between Apt. 8H and<br>8J                     | 120       | 1846      | 7/100     | <u>0.002</u>            |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

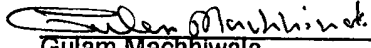
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 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

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Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

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 NVLAP Lab Code: 101953

Project No.: 01-2089003  
 Analyte: FIBERS  
 Date Received: 10/19/2001  
 Date Analyzed: 10/19/2001  
 Batch #: 0110A792

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                  | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|-------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 019<br>18-October<br>A 8060    | Ambient/ 6th Floor/ Apt. 6M At the North Section<br>of the Apt.         | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 020<br>18-October<br>A 8061    | Ambient/ 6th Floor/ Hallway Between Apt. 6E and<br>6F                   | 120       | 1846      | 16/100    | <u>0.004</u>            |
| 021<br>18-October<br>A 8062    | Ambient/ 3rd Floor/ Apt. 3F/ At the North Section<br>of the Living Room | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 022<br>18-October<br>A 8063    | Ambient/ 3rd Floor/ Hallway/ At the Entrance to<br>the Laundry Room     | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 023<br>18-October<br>A 8064    | Ambient/ Lobby/ At the Entrance to the Mail Room                        | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 024<br>18-October<br>A 8065    | Ambient/ Lobby/ At the Entrance to the Clock<br>Room                    | 120       | 1846      | 14/100    | <u>0.004</u>            |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

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 Batch #: 0110A792

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-----------|---------------|
|--------------------------------|------------------------|-----------|-----------|-----------|---------------|

|     |             |  |  |       |  |
|-----|-------------|--|--|-------|--|
| 025 | FIELD BLANK |  |  | 0/100 |  |
|-----|-------------|--|--|-------|--|

18-October  
 A 8066

|     |             |  |  |       |  |
|-----|-------------|--|--|-------|--|
| 026 | FIELD BLANK |  |  | 0/100 |  |
|-----|-------------|--|--|-------|--|

18-October  
 A 8067

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 23, 2001

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ENVIRONMENTAL CONSULTANTS, INC

November 8, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject:     Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 24, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read 'Stephen Pharai', is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

cc: file: 00-2089-04



ENVIRONMENTAL CONSULTANTS, INC

November 8, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

Attention: Ms. Cathy Brady

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates Inc..

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in cursive script, reading "Gulam Machhiwala".

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.  
JLC Project # 01-2089004  
November 8, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

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 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                 | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 001<br>24-October<br>A 8304    | Ambient/ PH Floor/ PH D in the North Section of the Living Room        | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 002<br>24-October<br>A 8305    | Ambient/ PH Floor/ Hallway Between PH B and PH C                       | 120       | 1846      | 6/100     | <u>0.002</u>            |
| 003<br>24-October<br>A 8306    | Ambient/ 27th Floor/ Rm 27B at the North Section of the Living Room    | 120       | 1846      | 5/100     | <u>0.001&lt;LOD</u>     |
| 004<br>24-October<br>A 8307    | Ambient/ 27th Floor/ Hallway Between Apt. 27D and 27 E                 | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 005<br>24-October<br>A 8308    | Ambient/ 22nd Floor/ Apt. 22K/ At the North Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 006<br>24-October<br>A 8309    | Ambient/ 22nd Floor/ Hallway Between Apt 22G and 22H                   | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

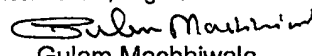
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: November 8, 2001

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ELAP Lab Code: 11029  
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 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                    | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|---------------------------------------------------------------------------|-----------|-----------|-----------|-------------------------|
| 007<br>24-October<br>A 8310    | Ambient/ 20th Floor/ Apt 20B/ At the North<br>Section of the Living Room  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 008<br>24-October<br>A 8311    | Ambient/ 20th Floor/ Hallway Between Apt 20G<br>and 20H                   | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 009<br>24-October<br>A 8312    | Ambient/ 18th Floor/ Apt. 18H/ At the North<br>Section of the Living Room | 120       | 1846      | 3/100     | <u>&lt;0.001&lt;LOD</u> |
| 010<br>24-October<br>A 8313    | Ambient/ 18th Floor/ Hallway Between Apt. 18I<br>and 18J                  | 120       | 1846      | 4/100     | <u>0.001&lt;LOD</u>     |
| 011<br>24-October<br>A 8314    | Ambient/ 14th Floor/ Apt. 14G/ At the North<br>Section of the Living Room | 120       | 1846      | 1/100     | <u>&lt;0.001&lt;LOD</u> |
| 012<br>24-October<br>A 8315    | Ambient/ 14th Floor/ Hallway Between Apt. 14H<br>and 14J                  | 120       | 1846      | 2/100     | <u>&lt;0.001&lt;LOD</u> |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

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 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

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**Instrumentation:**

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 Gulam Machhiwala  
 Laboratory Director

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 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| <b>SAMPLE #<br/>COLLECTED<br/>LAB #</b> | <b>DESCRIPTION / LOCATION</b>                                             | <b>TIME(min)</b> | <b>VOLUME(l)</b> | <b>FIB/FIELD</b> | <b>RESULTS(f/cc)</b>    |
|-----------------------------------------|---------------------------------------------------------------------------|------------------|------------------|------------------|-------------------------|
| 013<br>24-October<br>A 8316             | Ambient/ 11th Floor/ Apt. 11C/ At the North<br>Section of the Living Room | 120              | 1846             | 6/100            | <u>0.002</u>            |
| 014<br>24-October<br>A 8317             | Ambient/ 11th Floor/ Hallway Between Apt. 11H<br>and 11J                  | 120              | 1846             | 4/100            | <u>0.001&lt;LOD</u>     |
| 015<br>24-October<br>A 8318             | Ambient/ 9th Floor/ Apt. 9N/ At the North Section<br>of the Living Room   | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |
| 016<br>24-October<br>A 8319             | Ambient/ 9th Floor/ Hallway Between Apt. 9H and<br>9J                     | 120              | 1846             | 4/100            | <u>0.001&lt;LOD</u>     |
| 017<br>24-October<br>A 8320             | Ambient/ 8th Floor/ Apt. 8E/ At the North Section<br>of the Living Room   | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |
| 018<br>24-October<br>A 8321             | Ambient/ 8th Floor/ Hallway Between Apt. 8H and<br>8J                     | 120              | 1846             | 4/100            | <u>0.001&lt;LOD</u>     |

Sample Analysis by:  
 Positive Phase Contrast Microscopy (PCM)

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### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| <b>SAMPLE #<br/>COLLECTED<br/>LAB #</b> | <b>DESCRIPTION / LOCATION</b>                                           | <b>TIME(min)</b> | <b>VOLUME(l)</b> | <b>FIB/FIELD</b> | <b>RESULTS(f/cc)</b>    |
|-----------------------------------------|-------------------------------------------------------------------------|------------------|------------------|------------------|-------------------------|
| 019<br>24-October<br>A 8322             | Ambient/ 6th Floor/ Apt. 6M/ At the North Section<br>of the Living Room | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |
| 020<br>24-October<br>A 8323             | Ambient/ 6th Floor/ Hallway Between Apt. 6E and<br>6F                   | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |
| 021<br>24-October<br>A 8324             | Ambient/ 3rd Floor/ Apt. 3F At the North Section<br>of the Living Room  | 120              | 1846             | 4/100            | <u>0.001&lt;LOD</u>     |
| 022<br>24-October<br>A 8325             | Ambient/ 3rd Floor/ Hallway at the Entrance of<br>the Laundry Room      | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |
| 023<br>24-October<br>A 8326             | Ambient/ Lobby/ At the Entrance to the Clock<br>Room                    | 120              | 1846             | 2/100            | <u>&lt;0.001&lt;LOD</u> |
| 024<br>24-October<br>A 8327             | Ambient/ Lobby/ At the Entrance to the Mail Room                        | 120              | 1846             | 3/100            | <u>&lt;0.001&lt;LOD</u> |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

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Instrumentation:

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 Gulam Machhiwala  
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 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089004  
 Analyte: FIBERS  
 Date Received: 10/25/2001  
 Date Analyzed: 10/25/2001  
 Batch #: 0110A824

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| <b>SAMPLE #<br/>COLLECTED<br/>LAB #</b> | <b>DESCRIPTION / LOCATION</b> | <b>TIME(min)</b> | <b>VOLUME(l)</b> | <b>FIB/FIELD RESULTS(f/cc)</b> |
|-----------------------------------------|-------------------------------|------------------|------------------|--------------------------------|
| 025<br>24-October<br>A 8328             | FIELD BLANK                   |                  |                  | 0/100                          |
| 026<br>24-October<br>A 8329             | FIELD BLANK                   |                  |                  | 0/100                          |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: November 8, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

October 16, 2001

Rose Associates Inc.  
200 Madison Ave. 5th Floor  
New York, NY 10016

Attention: Ms. Cathy Brady

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Ms. Brady:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates Inc..

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in cursive script, reading "Gulam Machhiwala".

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates Inc.  
JLC Project # 01-2089002  
October 16, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
 200 Park Avenue South, Suite 1001, New York, New York 10003  
 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089002  
 Analyte: FIBERS  
 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                              | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|-------------------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 001<br>12-October<br>A 7513    | Ambient/ Corridor/ 30th Floor/ Right Next to the Entrance of Apartment 30C          | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 002<br>12-October<br>A 7514    | Ambient/ Inside/ 30th Floor/ Inside Apartment 30B/ At the North Section of the Room | 90        | 1385      | 7/100     | <u>0.002</u>  |
| 003<br>12-October<br>A 7515    | Ambient/ Corridor/ 25th Floor/ At the North Section of the Corridor                 | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 004<br>12-October<br>A 7516    | Ambient/ Corridor/ 25th Floor/ At the South Section of the Corridor                 | 90        | 1385      | 8/100     | <u>0.003</u>  |
| 005<br>12-October<br>A 7517    | Ambient/ 20th Floor/ At the North Section of the Apartment 20B                      | 90        | 1385      | 7/100     | <u>0.003</u>  |
| 006<br>12-October<br>A 7518    | Ambient/ 20th Floor/ At the South Section of the Corridor                           | 90        | 1385      | 8/100     | <u>0.003</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

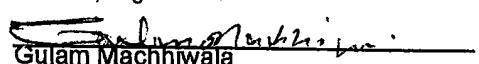
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
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 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates Inc.  
 200 Madison Ave. 5th Floor  
 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089002  
 Analyte: FIBERS  
 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                 | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 007<br>12-October<br>A 7519    | Ambient/ 15th Floor/ Corridor/ At the North<br>Section of the Corridor | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 008<br>12-October<br>A 7520    | Ambient/ 15th Floor/ At the South Section of the<br>Corridor           | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 009<br>12-October<br>A 7521    | Ambient/ 10th Floor/ At the North Section of the<br>Hallway            | 90        | 1385      | 7/100     | <u>0.002</u>  |
| 010<br>12-October<br>A 7522    | Ambient/ 10th Floor/ At the South Section of the<br>Hallway            | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 011<br>12-October<br>A 7523    | Ambient/ 9th Floor/ At the North Section of the<br>Hallway             | 90        | 1385      | 6/100     | <u>0.002</u>  |
| 012<br>12-October<br>A 7524    | Ambient/ 9th Floor/ At the South Section of the<br>Hallway             | 90        | 1385      | 5/100     | <u>0.002</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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Project No.: 01-2089002  
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 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                             | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|--------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 013<br>12-October<br>A 7525    | Ambient/ 8th Floor/ At the North Section of the<br>Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 014<br>12-October<br>A 7526    | Ambient/ 8th Floor/ At the South Section of the<br>Hallway         | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 015<br>12-October<br>A 7527    | Ambient/ 7th Floor/ At the North Section of the<br>Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 016<br>12-October<br>A 7528    | Ambient/ 7th Floor/ At the South Section of the<br>Hallway (South) | 90        | 1385      | 5/100     | <u>0.002</u>  |
| 017<br>12-October<br>A 7529    | Ambient/ 6th Floor/ At the South Section of the<br>Hallway         | 90        | 1385      | 4/100     | <u>0.001</u>  |
| 018<br>12-October<br>A 7530    | Ambient/ 6th Floor/ At the North Section of the<br>Hallway         | 90        | 1385      | 5/100     | <u>0.002</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

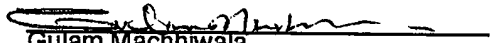
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs but the above.

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Rose Associates Inc.  
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 New York, NY 10016

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089002  
 Analyte: FIBERS  
 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                                      | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(ff/cc) |
|--------------------------------|-----------------------------------------------------------------------------|-----------|-----------|-----------|----------------|
| 019<br>12-October<br>A 7531    | Ambient/ 5th Floor/ In Room 5N/ At the Bedroom<br>Section Beside the Window | 90        | 1385      | 6/100     | <u>0.002</u>   |
| 020<br>12-October<br>A 7532    | Ambient/ 5th Floor/ Corridor/ At the North Section<br>of the Corridor       | 90        | 1385      | 4/100     | <u>0.001</u>   |
| 021<br>12-October<br>A 7533    | Ambient/ In the Lobby/ Next to the Mailroom                                 | 90        | 1385      | 3/100     | <u>0.001</u>   |
| 022<br>12-October<br>A 7534    | Ambient/ In the Lobby/ Next to the Gym                                      | 90        | 1385      | 4/100     | <u>0.001</u>   |
| 023<br>12-October<br>A 7535    | Ambient/ At the North Section of the PH Corridor                            | 90        | 1385      | 5/100     | <u>0.002</u>   |
| 024<br>12-October<br>A 7536    | Ambient/ At the South Section of the PH Room D                              | 90        | 1385      | 4/100     | <u>0.001</u>   |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

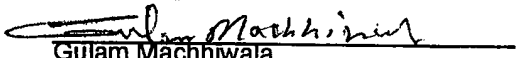
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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ELAP Lab Code: 11029  
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 NVLAP Lab Code: 101953

Project No.: 01-2089002  
 Analyte: FIBERS  
 Date Received: 10/15/01  
 Date Analyzed: 10/16/01  
 Batch #: 0110A741

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| <b>SAMPLE #<br/>COLLECTED<br/>LAB #</b> | <b>DESCRIPTION / LOCATION</b> | <b>TIME(min)</b> | <b>VOLUME(l)</b> | <b>FIB/FIELD RESULTS(f/cc)</b> |
|-----------------------------------------|-------------------------------|------------------|------------------|--------------------------------|
| 025<br>12-October<br>A 7537             | FIELD BLANK                   |                  |                  | 0/100                          |
| 026<br>12-October<br>A 7538             | FIELD BLANK                   |                  |                  | 0/100                          |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 16, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

October 6, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on October 5, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. The analytical results of the air samples using the PCM method indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read "Stephen Pharai", is written over a circular stamp or seal.

Stephen Pharai  
Director of Operations

Cc: file: 00-2089



ENVIRONMENTAL CONSULTANTS, INC

October 6, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read 'Gulam Machhiwala'.

Gulam Machhiwala  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089  
October 6, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

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Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                           | TIME(mln) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|------------------------------------------------------------------|-----------|-----------|-----------|---------------|
| 001<br>05-October<br>A 6935    | Ambient/ Corridor/ 30th Floor/ Between Apt. 30D and Laundry Room | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 002<br>05-October<br>A 6936    | Ambient/ Corridor/ 30th Floor/ Next to Stair B.                  | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 003<br>05-October<br>A 6937    | Ambient/ Corridor/ 25th Floor/ Next to Apt. 25D                  | 120       | 1837.8    | 5/100     | <u>0.001</u>  |
| 004<br>05-October<br>A 6938    | Ambient/ Corridor/ 25th Floor/ Next to Apt. 25A                  | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 005<br>05-October<br>A 6939    | Ambient/ Corridor/ 20th Floor/ Between Elevator and Service Room | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 006<br>05-October<br>A 6940    | Ambient/ 20th Floor/ Corridor/ Next to Apt. 20H                  | 120       | 1837.8    | 3/100     | <u>0.001</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                                   | TIME(mln) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|----------------------------------------------------------|-----------|-----------|-----------|---------------|
| 007<br>05-October<br>A 6941    | Ambient/ 15th Floor/ Corridor/ Between Apts. 15J & 15K   | 120       | 1837.8    | 5/100     | <u>0.001</u>  |
| 008<br>05-October<br>A 6942    | Ambient/ 15th Floor/ Corridor/ Between Stairs & Apt. 15A | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 009<br>05-October<br>A 6943    | Ambient/ 10th Floor/ Corridor/ Between Apts. 10L & 10M   | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 010<br>05-October<br>A 6944    | Ambient/ 10th Floor/ Corridor/ Below Apt. Direction Sign | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 011<br>05-October<br>A 6945    | Ambient/ PH Fl. Corridor                                 | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 012<br>05-October<br>A 6946    | Ambient/ PH Fl. Corridor                                 | 120       | 1837.8    | 3/100     | <u>0.001</u>  |

Sample Analysis by:

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

  
 Gulam Machhiwala  
 Laboratory Director

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of ana

**JLC ENVIRONMENTAL CONSULTANTS, INC.**  
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 Phone: (212) 420-8119 Fax: (212) 420-6092

Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                 | TIME(mln) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|----------------------------------------|-----------|-----------|-----------|---------------|
| 013<br>05-October<br>A 6947    | Ambient/ 5th Floor Corridor            | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 014<br>05-October<br>A 6948    | Ambient/ 5th Floor Corridor            | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 015<br>05-October<br>A 6949    | Ambient/ Lobby Next to Mail Room       | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 016<br>05-October<br>A 6950    | Ambient/ Lobby Gym                     | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 017<br>05-October<br>A 6951    | Ambient/ Apt. 11C/ Hallway By Bathroom | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 018<br>05-October<br>A 6952    | Ambient/ Apt. 11C/ Children Room       | 120       | 1837.8    | 4/100     | <u>0.001</u>  |

**Sample Analysis by:**

Positive Phase Contrast Microscopy (PCM)

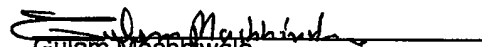
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

**Method of Sample Preparation and Analysis:**

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

**Instrumentation:**

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc) |
|--------------------------------|---------------------------------------|-----------|-----------|-----------|---------------|
| 019<br>05-October<br>A 6953    | Ambient/ Apt. 3H/ Back Bedroom        | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 020<br>05-October<br>A 6954    | Ambient/ Apt. 3H/ Hall By Bathroom    | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 021<br>05-October<br>A 6955    | Ambient/ Apt. 17H                     | 120       | 1837.8    | 4/100     | <u>0.001</u>  |
| 022<br>05-October<br>A 6956    | Ambient/ Apt. 17H                     | 120       | 1837.8    | 3/100     | <u>0.001</u>  |
| 023<br>05-October<br>A 6957    | Ambient/ PHC/ 2nd Level Bedroom       | 120       | 1837.8    | 2/100     | <u>0.001</u>  |
| 024<br>05-October<br>A 6958    | Ambient/ PHC/ 2nd Level Bathroom Area | 120       | 1837.8    | 2/100     | <u>0.001</u>  |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

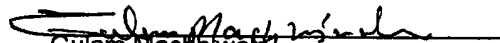
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 10/5/2001  
 Date Analyzed: 10/5/2001  
 Batch #: 0110A688

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION | TIME(min) | VOLUME(l) | FIB/FIELD RESULTS(f/cc) |
|--------------------------------|------------------------|-----------|-----------|-------------------------|
| 025<br>05-October<br>A 6959    | FIELD BLANK            |           |           | 0/100                   |
| 026<br>05-October<br>A 6960    | FIELD BLANK            |           |           | 0/100                   |
| 027<br>05-October<br>A 6961    | FIELD BLANK            |           |           | 0/100                   |
| 028<br>05-October<br>A 6962    | FIELD BLANK            |           |           | 0/100                   |
| 029<br>05-October<br>A 6963    | FIELD BLANK            |           |           | 0/100                   |
| 030<br>05-October<br>A 6964    | FIELD BLANK            |           |           | 0/100                   |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

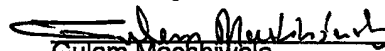
<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

  
 Gulam Machhiwala  
 Laboratory Director

Report Date: October 6, 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



ENVIRONMENTAL CONSULTANTS, INC

September 24, 2001

Ms. Kathy Brady  
Rose Associates, Inc.  
200 Madison Avenue  
New York, NY 10016

**Subject: Ambient Air Sampling at 21 West Street, New York, NY**

Dear Ms. Brady:

JLC Environmental Consultants, Inc. (JLC) conducted ambient air sampling at various locations at the above site on September 17, 2001. The air samples were analyzed using the Phase Contrast Microscopy (PCM) Methodology. On September 18, 2001 some of the samples were submitted for analysis using the Transmission Electron Microscopy Method NIOSH 7402. The analytical results of the air samples using both the PCM and TEM methods indicated that all samples achieved the acceptance criteria of at or below <0.01 fibers per cubic centimeters.

**Based on these results the sampled locations are considered safe for re-occupancy.**

The air sampling and analysis were done utilizing applicable Federal, New York State and New York City Regulations pertaining to asbestos to include Federal OSHA (29 CFR 1926.58), EPA NESHAPS (40 CFR Part 61), and TSCA Title II AHERA/ASHARA (40 CFR Part 763) Asbestos Regulations; the New York State Department of Labor Industrial Code Rule 56 and the New York City Department of Environmental Protection Title 15 Asbestos Regulations.

Upon review should you have any questions please feel free to contact me at (212) 420-8119.

Sincerely,  
**JLC Environmental Consultants, Inc.**

A handwritten signature in black ink, appearing to read 'Stephen Pharai', is written over a circular stamp or logo.

Stephen Pharai  
Director of Operations

Cc: file: 00-2089



ENVIRONMENTAL CONSULTANTS, INC

September 18, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: PCM Air Sampling Analysis for 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results for air sampling conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

After their arrival, samples were individually prepared and tested for airborne fiber content. The detailed protocol for air sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Phase Contrast Microscopy, and Analytical Results. Any questions concerning results and documentation should also be answered in these sections.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any questions. We hope to be of further assistance in the future.

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in dark ink, appearing to read "Al Wallner".

Al Wallner  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089  
September 18, 2001  
page 2

## **Air Sampling Analysis and Procedure**

### **Introduction**

Air sampling is defined as the process of measuring the filter content of a known volume of air entrained on a filter membrane over a specified period of time. Each sample is cross-referenced by field designation and a JLC lab internal code to ensure proper, consistent handling through a chain of custody. Sample preparation takes place within an HEPA filter clean bench to avoid any possible contamination.

### **Methodology**

Test procedures for these samples conform to the National Institute of Occupational Safety and Health (NIOSH) standards.

Air sampling was conducted at a level approximating the breathing zone of persons anticipated to be present in the area during normal operations. Samples collected should represent the area's typical airborne fiber concentration.

All samples were collected on fully exposed 25 millimeter, 0.8 micrometer ( $\mu\text{m}$ ) cellulose ester membrane air sampling cassettes with conductive cowl.

### **Analytical Procedures**

A section of the filter approximating twenty-five percent of the total filter was removed and placed on a pre-cleaned microscope slide and then exposed to approximately 250 microliter ( $\mu\text{l}$ ) of acetone vapor. A single 3.0 - 3.5  $\mu\text{l}$  drop of triacetin was applied and a clean #1.5 cover slip was placed upon the filter. The prepared slide was then heated on a slide heater until clarity allowed analysis to be conducted.

Analysis was accomplished utilizing a Phase Contrast Microscope in accordance with NIOSH 7400 method, counting rule "A."

### **Phase Contrast Microscopy**

JLC Environmental's laboratory uses an Olympus BH-PC Phase Contrast Microscope, (PCM) equipped with a Walton-Beckett Graticule. Samples were analyzed by first dissolving the filter through a chemical process (described above) and then counting the fibers with PCM at 400x magnification. Phase contrast increases the light contrast between the object and the background, thus enhancing the microscopist's ability to see fibers. Normally, 100 microscopic fields or 100 fibers are counted, whichever occurs first.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of the analysis of the samples. The PCM limit of reliable quantification is less than 0.01 fibers/cubic centimeter (f/cc) of air. If final tests do not meet these requirements, the entire work site must be re-cleaned and re-tested.

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 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: FIBERS  
 Date Received: 9/17/01  
 Date Analyzed: 9/18/01  
 Batch #: 0109A629

### SUMMARY OF ANALYTICAL RESULTS

Site: 21 West Street, New York, NY

| SAMPLE #<br>COLLECTED<br>LAB # | DESCRIPTION / LOCATION                  | TIME(min) | VOLUME(l) | FIB/FIELD | RESULTS(f/cc)           |
|--------------------------------|-----------------------------------------|-----------|-----------|-----------|-------------------------|
| 001<br>17-September<br>A 6223  | Ambient/ Apartment #3E/ Bedroom - North | 120       | 1847      | 5/100     | <u>0.001&lt;LOD</u>     |
| 002<br>17-September<br>A 6224  | Ambient/ Hallway/ @ Apartment #3E       | 120       | 1847      | 2/100     | <u>&lt;0.001&lt;LOD</u> |
| 003<br>17-September<br>A 6225  | Ambient/ Hallway/ By Apartment #9L      | 120       | 1847      | 14/100    | <u>0.004</u>            |
| 004<br>17-September<br>A 6226  | Ambient/ Apartment #9L/ Bedroom         | 120       | 1847      | 65/100    | <u>0.017</u>            |
| 005<br>17-September<br>A 6227  | Ambient/ Apartment #22K/ Bedroom        | 120       | 1847      | 50/100    | <u>0.013</u>            |
| 006<br>17-September<br>A 6228  | Ambient/ Hallway/ By Apartment #22K     | 120       | 1847      | 51/100    | <u>0.014</u>            |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
 VOID1 = H.C.P. ( High Concentration of Particles)  
 VOID2 = Overloaded

  
 AI Wallner  
 Laboratory Director

Report Date: September 18,  
 2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis of these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.

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Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

ELAP Lab Code: 11029  
NIOSH and AIHA Lab Code: 100273  
NVLAP Lab Code: 101953

Project No.: 01-2089  
Analyte: FIBERS  
Date Received: 9/17/01  
Date Analyzed: 9/18/01  
Batch #: 0109A629

**SUMMARY OF ANALYTICAL RESULTS**

Site: 21 West Street, New York, NY

| <b>SAMPLE #<br/>COLLECTED<br/>LAB #</b> | <b>DESCRIPTION / LOCATION</b> | <b>TIME(min)</b> | <b>VOLUME(l)</b> | <b>FIB/FIELD RESULTS(f/cc)</b> |
|-----------------------------------------|-------------------------------|------------------|------------------|--------------------------------|
| 007<br>17-September<br>A 6229           | FIELD BLANK                   |                  |                  | 0/100                          |
| 008<br>17-September<br>A 6230           | FIELD BLANK                   |                  |                  | 0/100                          |

Sample Analysis by:

Positive Phase Contrast Microscopy (PCM)

Method of Sample Preparation and Analysis:

All samples analyzed in accordance with the NIOSH 7400 Method using "A" Counting Rules. Issue 2, August 1994

Instrumentation:

Olympus PCM Model BH-2 with Walton-Beckett Graticule (100um field diameter).

<LOD = Less than limit of detection which is 5.5 Fibers/ 100 Fields  
VOID1 = H.C.P. ( High Concentration of Particles)  
VOID2 = Overloaded

AI Wallner   
Laboratory Director

Report Date: September 18,  
2001

JLC is responsible for only the fiber counts within the limitations of the method described as NIOSH 7400. Among other limitations, this method gives only an index of airborne fibers and provides only an estimate of asbestos concentration. Any and all claims arising out of JLC's analysis these samples are limited in recovery to the cost of analyzing samples. JLC accepts no other liability and the client agrees to seek no costs beyond the above.



September 19, 2001

Rose Associates  
200 Madison Avenue  
New York, NY 10016-3901

Attention: Mr. Neil Dugan

Reference: 21 West Street, New York, NY

Dear Mr. Dugan:

Enclosed please find the analytical results of the building materials inspection conducted at 21 West Street, New York, NY.

All samples were collected and analyzed by JLC Environmental Consultants, Inc. (JLC) at the request of Rose Associates.

According to procedure, samples were placed in double plastic bags at the site location and transported to the JLC laboratory. Upon arrival, the samples were individually prepared and identified as friable or non-friable and then analyzed and indexed by date of collection, receipt, and analysis, as well as location, color, total estimated percentage of asbestos, and type(s) and estimated percentage(s) of each asbestos fiber group and non-asbestos fiber groups.

The detailed protocol for friable bulk material sample preparation and analysis is discussed in detail in the five sections on the following page: Introduction, Methodology, Analytical Procedures, Polarized Light Microscopy, and Analytical Results. These sections should clarify most questions concerning the results and documentation for this project.

JLC Environmental Consultants, Inc. appreciates the opportunity to serve your organization. Please contact us with any further questions. We look forward to working with you again in the

Sincerely,

**JLC Environmental Consultants, Inc.**

A handwritten signature in dark ink, appearing to read "Al Wallner", is written over a horizontal line.

Al Wallner  
Laboratory Director  
cc: File

Rose Associates  
JLC Project # 01-2089

page 2

## **Bulk Building Materials Analysis and Procedure**

### **Introduction**

Polarized light microscopy with dispersion staining (PLM-DS) is the most efficient method for detecting asbestos in bulk samples. It is this method that the JLC lab uses during bulk building material analyses.

### **Methodology**

A chain of custody is kept for each sample to ensure proper handling and delivery to the JLC lab prior to analysis. To avoid any possible contamination, all sample and slide preparation is carried out in a ventilated, HEPA-filter hood with continuous airflow. Sample analysis is performed using PLM-DS in accordance with the USEPA, "Method for the Determination of Asbestos in Bulk Building Materials," EPA 600 R-93 116, July 1993, and NYDOH-ELAP certification manual, "Polarized Light Microscope Methods for Identifying and Quantitating Asbestos in Bulk Samples," ELAP 198.1, October 1993.

### **Analytical Procedures**

All samples are subject to preliminary visual stereomicroscopic examination. Observation of homogeneity, fiber identification, and semi-quantitation of constituents can be made at this point. Samples lacking uniformity of composition and/or distribution of component materials then undergo homogenization. Some non-friable organically bound (NOB) samples such as floor tiles and roofing materials may require additional steps to dislodge problem matrices (i.e. ashing, extractions, and TEM).

Identification of suspect fibers is made by PLM analysis of subsamples. A microscope equipped with dual polarizing filters enables us to observe specific optical characteristics of each sample. Positive identification of asbestos requires determination of the following optical properties: morphology, color and pleochroism, refractive indices, birefringence, extinction characteristics, and signs of elongation.

Asbestos quantitation is performed by point-counting procedure, a standard technique in petrography for determining the relative areas occupied by separate minerals in rock. An ocular reticle superimposes a point or points over the microscope's field of view. The number of points positioned directly above each kind of particle or fiber is recorded. A total of 400 points must be counted over at least eight different representative subsamples to complete analysis.

### **Polarized Light Microscopy**

JLC uses an Olympus BHT-P Polarizing Microscope complete with polarizer, analyzer, port for wave retardation plate, 360 degree graduated rotating stage, substage condenser, lamp and lamp iris, eyepiece reticle, and 25 point Chalkley Point Array. Plane polarized light allows for the determination of refraction indices relative to specific crystallographic orientations. Morphology and color can also be observed under plane polarized light. Observation of particles or fibers while oriented between polarizing filters whose privileged vibration directions are perpendicular allows for determination of isotropism/ anisotropism, extinction characteristics of anisotropic particles, and calculation of birefringence. A retardation plate may be placed in the polarized light path for verification of signs of elongation.

### **Analytical Results**

The "Summary of Analytical Results" represents the results of analysis. Positive results mean the sample is asbestos or contains more than one percent asbestos by weight. The results are generally sufficient for identification and quantitation of major concentrations of asbestos. However, it may be found that additional techniques may be necessary. Please be aware that PLM is not consistently reliable in detecting asbestos in floor coverings and similar NOB materials. Before the material can be considered or treated as non-asbestos containing, confirmation must be made by quantitative Transmission Electron Microscopy (TEM).

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Rose Associates  
 200 Madison Avenue  
 New York, NY 10016-3901

ELAP Lab Code: 11029  
 NIOSH and AIHA Lab Code: 100273  
 NVLAP Lab Code: 101953

Project No.: 01-2089  
 Analyte: ASBESTOS  
 Date Received: 9/19/01  
 Date Analyzed: 9/19/01  
 Batch #: 0109B370

### SUMMARY OF ANALYTICAL RESULTS - PLM

Site: 21 West Street, New York, NY

#### SAMPLE #

DATE  
COLLECTED

DESCRIPTION / LOCATION

COLOR

ASBESTOS  
DETECTED?

TOTAL % OF  
ASBESTOS

CONSTITUENTS

LAB #

CLIENT'S SAMPLE #

|                                         |                                           |     |    |    |                      |                   |
|-----------------------------------------|-------------------------------------------|-----|----|----|----------------------|-------------------|
| 001<br>9/18/01<br>10468                 | Apartment 9L/ Window Sill/ Sample of Dust | TAN | NO | 0% | CELL<br>FBGL<br>NFIB | 20%<br>65%<br>15% |
| 001A<br>002<br>9/18/01<br>10469         | Apartment 22K/ TV Stand/ Sample of Dust   | TAN | NO | 0% | CELL<br>FBGL<br>NFIB | 20%<br>65%<br>15% |
| 002B<br>003<br>9/18/01<br>10470<br>003C | Apartment 3E/ Desk/ Sample of Dust        | TAN | NO | 0% | CELL<br>FBGL<br>NFIB | 15%<br>70%<br>15% |

\*INSUFFICIENT MATERIAL SUBMITTED

\*\*TEM RECOMMENDED

\*\*\*NOT ANALYZED POSITIVE STOP

Sample Analysis by:

Polarized Light Microscopy-Dispersion Staining (PLM-DS)

Method of Sample Preparation and Analysis:

All samples were prepared and analyzed in accordance with the EPA "Method for the Determination of Asbestos in Bulk Building Materials" USEPA/ 600/ R-93/116, July 1993.

Instrumentation:

Olympus PLM, Model BH-2/VM Stereomicroscope, Model VMZ 1x-4x.

ASBESTOS CONSTITUENTS

CHRY = Chrysotile Asbestos  
 AMOS = Amosite Asbestos  
 CROC = Crocidolite Asbestos  
 ACTN = Actinolite Asbestos  
 TREM = Tremolite Asbestos  
 ANTH = Anthophyllite Asbestos

NON-ASBESTOS CONSTITUENTS

PAPF = Paper Fiber  
 MINW = Mineral Wool  
 FBGL = Fiberglass  
 SYN = Synthetic Fibers  
 CELL = Cellulose  
 NFIB = Non-Fibrous  
 ORGM = Organic Material  
 WOLL = Wollastonite  
 HSHR = Horse Hair  
 OTHR = Other



Al Wallner  
 Laboratory Director

Analytical results reflect the make up of the materials only in the areas sampled. This "Summary of Analytical Results" shall not be reproduced except in full, without the written approval of JLC Laboratory, and it must not be used by client to claim product endorsement by NVLAP or any agency of the U.S. Government. This method is not applicable to samples containing large amounts of fine fibers below the resolution of the light microscope. The value of this method is limited to the quantitative identification of asbestos and the semi-quantitative determination of asbestos content of bulk samples, expressed as a percentage of the protected area. Quantitation of asbestos content was determined with a visual volume estimate, a calibrated visual area estimate, and/or point counting procedure. CAUTION: Other fibers with optical properties similar to asbestos may give positive interferences and will be considered asbestos under this methodology. Also, PLM is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically-bound materials. Quantitative transmission electron microscopy is currently the only method that can be used to determine if this material can be considered or treated as non-asbestos containing.