

Summary of Asbestos Sampling Results

250 South End Avenue, New York, N.Y., 10280

Date sampled: November 14, 2001

Air samples were collected at four locations and dust samples were collected at five locations at your building. Air and dust samples were collected inside two private residences, an indoor common area (e.g., a lobby or hallway), and a nearby outdoor area. An additional dust sample was collected from a window sill from another private residence. (See tables below for sampling results).

Air samples were collected using vacuum pumps to draw air past a filter that was suspended at the height of a person's breathing level. Outdoor dust and debris samples were collected by placing visible material in a container. Indoor dust and debris samples were collected on a filter by vacuuming surfaces. The collected material was weighed, viewed under a microscope, and/or chemically processed to determine the types and quantities of substances present. The materials are being analyzed for fibers such as asbestos, fiberglass, synthetics (e.g. man-made materials such as nylon and polyester), cellulose (e.g. cotton, paper), silica, and for other minerals and small particles.

ASBESTOS AIR TEST RESULTS

The air samples tested from outside, in the common area and an occupied residence of your building were taken during normal daily activity. The air sample from the unoccupied apartment was taken after the dust in the apartment was aggressively "stirred up" to ensure that an accurate sample of particles would be present. All air samples were examined in a laboratory for fibers using the Phase Contrast Microscopy (PCM) method.

Airborne fibers as determined by PCM analysis: An air sample is collected by pulling air through a filter. The filter catches fibers and is sent to a laboratory to determine the number of fibers in the air. Phase contrast microscopy identifies fibers based on size and shape, but not the specific type of fiber. Therefore, the fibers seen by PCM include asbestos fibers as well as other fibers, such as textiles, fiberglass and cellulose which might be present in your home. The PCM analysis assumes that all fibers present were asbestos. Therefore, less hazardous fibers that may have been present, such as textiles or fiberglass, are counted along with the asbestos fibers, and the total fiber count is then compared to the asbestos standard. If the results were above 0.003 f/cc using the PCM methodology, additional analysis was performed to determine whether any of the fibers were asbestos. This additional analysis was done for the common area air sample.

Results of all of the air samples taken from your building were below the standard set for indoor air quality - 0.01 fibers per cubic centimeter (f/cc). With the exception of one sample, the levels of fibers found were comparable to the air results from buildings located above 59th Street, which are not expected to have been impacted by WTC materials. In the homes above 59th Street, levels of fibers found in the air ranged from less than 0.001 f/cc to 0.003 f/cc. One air sample (0.005 f/cc) was slightly above the levels found in the comparison buildings, however, analysis of this air sample by transmission electron microscopy (TEM), shows these fibers were not asbestos (see below for further details).

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Results of Phase Contrast Microscopy (PCM) testing of 250 South End Avenue, November 14, 2001

Area Sampled	Outside	Common	Residence 1	Residence 2
Sample Numbers	A-O-2	A-C-2	A-R1-2	A-R2-2
Concentration of Fibers in Air at this location (f/cc)*	0.003	0.005	<0.001	0.002
Concentration of Fibers in Air at background locations (f/cc)	<0.001 to 0.001	<0.001 to 0.002	<0.001 to 0.003	<0.001 to 0.003
NYC Re-occupancy Standard (f/cc)**	0.01	0.01	0.01	0.01

* f/cc is fibers in each cubic centimeter (cc) of air. This is calculated from the number of fibers seen on the air filter and the volume of air pulled through the filter measured in cubic centimeters.

** New York City Department of Environmental Protection asbestos clearance criteria for post-abatement work (Rules of the City of New York, Title 15, Chapter 1)

Asbestos in air as determined by TEM analysis: TEM analysis is very specific and can distinguish between asbestos and non-asbestos fibers, such as textiles, fiberglass, or cellulose. This analysis determines if the fibers seen in the PCM analysis are asbestos, or if they are some other material. TEM analysis was conducted on all air samples that showed more than 0.003 f/cc in the air by PCM analysis. No asbestos fibers were found in the TEM analysis of the air samples in your building where PCM levels exceeded 0.003 f/cc.²

Results of Transmission Electron Microscopy (TEM) testing of 250 South End Avenue, November 14, 2001

Area Sampled	Common
Sample Numbers	A-C-2
Concentration of Asbestos Fibers in Air at this location (f/cc)*	< 0.001
Concentration of All Fibers in Air at background locations (f/cc)	< 0.001 to 0.003
NYC Re-occupancy Standard (f/cc) **	0.01

* f/cc is fibers in each cubic centimeter (cc) of air. This is calculated from the number of fibers seen on the air filter and the volume of air pulled through the filter measured in cubic centimeters.

** New York City Department of Environmental Protection asbestos clearance criteria for post-abatement work (Rules of the City of New York, Title 15, Chapter 1)

² The TEM method employed here, NIOSH 7402, counts fibers of the same size as those detected by PCM analysis. Fibers reported here are greater than or equal to 5 microns in length and 0.25 microns in width.

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ASBETOS DUST TEST RESULTS

The dust and debris samples were examined by two different laboratory methods for asbestos fibers, Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM). PLM is used to define asbestos containing material in dust and debris. A material is considered to be asbestos containing material if it contains more than 1% asbestos using the PLM method. The PLM method only counts the larger asbestos fibers. Therefore, if results by PLM were not greater than 1% asbestos, the sample was then analyzed by the TEM method that does count the smaller fibers. However, TEM analysis is not used for regulatory purposes for dust samples.

Asbestos was found in low levels in the courtyard outside the building. DOH and City Department of Environmental Protection (DEP) inspected the building after the sampling was conducted to determine if further action was warranted. Additional testing and an assessment of the debris in the garden troughs in the courtyard indicated that it needed to be cleaned by an asbestos abatement contractor. The building owner hired a contractor and the debris was abated in accordance with DEP asbestos abatement regulations. Low levels of asbestos were also found in the dust on a window sill of the building. The concentration of asbestos found in this sample did not warrant the use of an asbestos abatement contractor since it was less than 1%. No asbestos fibers were found in the dust samples collected from the floor in the common area or two residences.

Fibrous materials in dust found by PLM analysis: Polarized Light Microscopy identifies asbestos fibers by shape and optical characteristics. Other fibers such as fabric (synthetics), paper (cellulose) and fiberglass may be identified in the analysis. The laboratory analyst will count the fibers present to give an estimate of fiber content. PLM is used for regulatory purposes for dust samples.

Results of Polarized Light Microscopy (PLM) testing of 250 South End Avenue, November 14, 2001

Area Sampled	Outside	Outside*	Common	Residence 1	Residence 2	Residence 3**
Sample Numbers	SA-C-2	SA-C-2B	VA-C-2	VA-R1-2	VA-R2-2	VA-R3-2
Asbestos fibers (%)	< 1 %	1.3 %	None Detected	None Detected	None Detected	< 1 %

* The outdoor courtyard was resampled on December 6th to confirm the presence of asbestos.

** This sample was settled dust from a living room window sill. The other interior dust samples were from the floor.

Asbestos in dust as determined by TEM analysis: TEM analysis was conducted on all dust samples that showed asbestos content by PLM as less than 1%. TEM analysis is very specific, can detect smaller fibers of asbestos and is subject to less interference. This analysis was done to confirm the PLM findings of no asbestos found. However, TEM analysis is not used for regulatory purposes for dust samples.

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Results of Transmission Electron Microscopy (TEM) testing of 250 South End Avenue,
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Area Sampled	Outside	Outside	Common	Residence 1	Residence 2	Residence 3
Sample Numbers	SA-C-2	SA-C-2B	VA-C-2	VA-R1-2	VA-R2-2	VA-R3-2
Asbestos fibers (%)	1.2 %	Not analyzed*	Not analyzed**	Not analyzed**	Not analyzed**	Not analyzed**

* Settled dust samples positive by PLM were not reanalyzed by TEM.

** The laboratory reports insufficient sample for additional analysis.

ENVIRONMENTAL MANAGEMENT SOLUTIONS
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January 4, 2002

Mr. Alfonso Plumbtree
NYCDEP
59-17 Junction Boulevard
Elmhurst, NY 11373

Re: 250 South End Avenue, New York, NY

As a result of the World Trade Center disaster the NYC-DEP has been collecting samples from properties in the immediate vicinity. Samples collected by the NYC-DEP at 250 South End Avenue indicate that the property has been impacted by the disaster and that ACM is on the property. Your office has indicated that this matter requires appropriate action. As per our telephone conversation on January 2, 2002 regarding the above referenced project please find below the items requested in order to comply with NYC-DEP requirements.

SCOPE OF WORK

The scope of work involves the clean up of an approximately 9,375 square foot area (exterior court yard/patio area, see attached diagram) located at 250 South End Avenue in Manhattan.

Prior to mobilization an ACP-7 will be filed with the NYC-DEP your office for the general clean up associated with this project. The project shall be classified as a large project. This notification along with the appropriate \$1,200.00 filing fee shall be made at least 48 hours prior to mobilization as per our conversation.

Environmental Management Solutions, Inc. (NYS-DOL License number AC-99-0126) will mobilize to the site and cordon off the area to restrict access. A remote decontamination facility with hot and cold running water adjustable at the tap as per Title 15, Chapter 1 of the City of New York and large enough to accommodate the size of the crew anticipated and constructed as per title 15, Chapter 1 of the City of New York shall be constructed. A crew of six asbestos abatement handlers and one asbestos abatement supervisor shall be utilized. All workers and supervisors shall be properly trained and certified as per requirements of the NYC-DEP and NYS-DOL.

The area shall be wet wiped and HEPA vacuumed. As per your directives no containment or critical barriers shall be erected. Additionally soil in areas of plantings shall be removed to a depth of three inches and bag as asbestos containing waste. All materials shall be bagged wet sealed and double bagged. All waste generated shall be properly bagged and disposed of as asbestos containing material. The asbestos waste shall be transported to a properly certified asbestos waste facility by IESI (NJ-462) located at (landfill)

250 South End Avenue, New York, NY Courtyard clean up

As per NYC-DEP requirements an independent third party air monitor shall be retained. During the project Enviro-Watch, an independent third party air monitor (asbestos license AC-99-0906) shall collect and analyze air sample via PCM methodologies. The samples shall be analyzed by Enviro-Watch's ELAP accredited laboratory (ELAP 11459). Once the clean-up project has been completed a final visual examination by the air monitor shall be conducted to insure visible debris has been removed. After an acceptable final visual examination has been accomplished final air samples shall be collected utilizing PCM methodologies. These samples will be held for analysis (if necessary) via TEM methodologies due to the nature of the particulate laden air in the vicinity of the project.

All applicable federal, State, and city rules and regulations shall be followed for this project.

Once final clearance air levels have been achieved EMS shall de-mobilize and break down the remote decontamination unit. All fully executed and proper paper work shall be forwarded to EMS's client upon receipt.

Sincerely



Bob Friedl
Senior Project Manager

Cc: John Piastra RY Management