

## Summary of Asbestos Sampling Results 161 East 88<sup>th</sup> Street, New York, N.Y.

Date sampled: December 8, 2001

Three locations were sampled at your building: inside one private residence, an indoor common area (e.g., a lobby or hallway), and a nearby outdoor area (see tables below for sampling results). One air sample was collected in the common and outdoor locations and two samples were collected from the residence. One settled dust sample was collected at each of the two indoor locations.

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. Indoor dust and debris samples were collected on a filter by vacuuming surfaces. Outdoor dust samples were collected only when there was visible dust and debris to obtain bulk material. 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 directly outside, in the lobby of your building, and in the apartment were taken during normal daily activity. All air samples were examined in a laboratory for fibers using the Phase Contrast Microscopy (PCM) method.

No fibers were detected in the air sample taken outdoors. One of the two samples taken in the residence did have 0.001 fibers per cubic centimeter of air (f/cc) when analyzed by PCM. The sample taken in the lobby had 0.002 f/cc. These concentrations from your building are well below the standard set for indoor air quality and therefore no follow-up action is needed.

**Airborne fibers as determined by Phased Contrast Microscopy (PCM):** An air sample is collected by pulling air through a filter. The filter catches fibers and is sent to a laboratory to determine what types of fibers were 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, 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 (the New York City Department of Environmental Protection asbestos clearance criteria for post-abatement work). If the PCM results from the lower Manhattan buildings were above the highest level found in the comparison buildings, additional analysis was performed to determine whether any of the fibers were asbestos.

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Results of Phase Contrast Microscopy (PCM) testing of air at 161 East 88<sup>th</sup> Street, Dec. 8, 2001

| Area Sampled                                                         | Outside         | Common          | Residence 1            |
|----------------------------------------------------------------------|-----------------|-----------------|------------------------|
| Sample Numbers                                                       | A-O-32          | A-C-32          | A-R1-32<br>A-R1-X-32 * |
| Concentration of Fibers at 161 East 88 <sup>th</sup> Street (f/cc)** | <0.001          | 0.002           | <0.001<br>0.001*       |
| Concentration of Fibers in air at all background locations (f/cc)    | <0.001 to 0.001 | <0.001 to 0.002 | <0.001 to 0.003        |
| NYC Re-occupancy Standard (f/cc)***                                  | 0.01            | 0.01            | 0.01                   |

\* Denotes a second air sample taken in the same location.

\*\* 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 DUST TEST RESULTS

In general, 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.

No asbestos fibers were found in the dust samples from the common area or in the residence by the PLM laboratory method. TEM analysis also did not detect any asbestos in the indoor dust. Not enough visible dust and debris was available for collection in the outdoor area.

**Fibrous materials in dust found by Polarized Light Microscopy (PLM) Analysis:** PLM 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.

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Results of Polarized Light Microscopy (PLM) testing of dust at 161 East 88<sup>th</sup> Street,  
 December 8, 2001

| Area Sampled        | Outside           | Common        | Residence 1   |
|---------------------|-------------------|---------------|---------------|
| Sample Numbers      | No Dust Available | VA-C-32       | VA-R1-32      |
| Asbestos fibers (%) | No Dust Available | None detected | None detected |

**Asbestos in dust as determined by Transmission Electron Microscope (TEM) Analysis:**

TEM analysis was conducted on all dust samples that showed asbestos content by PLM as less than 1% (if sufficient quantities were available). TEM analysis is very specific, can detect smaller fibers of asbestos, and is subject to less interference. This analysis was done to confirm the above PLM findings of no asbestos found. TEM analysis is not used for regulatory purposes for dust samples.

Results of Transmission Electron Microscope (TEM) testing of dust at 161 East 88<sup>th</sup> Street,  
 December 8, 2001

| Area Sampled             | Outside           | Common        | Residence 1   |
|--------------------------|-------------------|---------------|---------------|
| Sample Numbers           | No Dust Available | VA-C-32       | VA-R1-32      |
| Asbestos present in dust | No Dust Available | None detected | None detected |