

New York City Housing Authority

*Re-Occupying 250 Broadway after September 11, 2001
Incident*

Summary Report of Environmental Sampling & Clean-Up Activities

October 11, 2001

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OCTOBER 11, 2001

250 Broadway

Summary Report of Environmental Sampling & Clean-Up Activities

Executive Summary

In the aftermath of the September 11th collapse of the World Trade Center Towers, the New York City Housing Authority's (NYCHA) Technical Service Department and Employee Health & Safety Compliance Office worked closely with the AmTrust Realty Corporation (AmTrust) to insure that NYCHA's Offices in 250 Broadway were safe for re-occupancy by September 21, 2001. Prior to reopening 250 Broadway, AmTrust followed both the New York City's Department of Citywide Administrative Services (DCAS) and Department of Environmental Protection (DEP) published procedures for reopening a building, after the disaster, in Lower Manhattan (see Attachment F for copies of those procedures).

Both AmTrust and NYCHA performed environmental sampling and specialized dust cleaning because of potential contamination from the smoke and dust that was released into the air following the collapse of the Twin Towers. The plume of smoke from the collapse contained dust, ash, soot, and other burning materials present at the site and both parties were concerned that the plume might have contaminated the HVAC system and building envelope. NYCHA visually assessed the building's air handling units, supply ducts and NYCHA spaces and found no visual evidence that the plume contaminated the building. Both AmTrust and NYCHA collected asbestos and lead samples; no asbestos was detected in any of the samples but elevated lead in dust levels were found in several of the dust samples. Please be aware that NYCHA used the most protective standard under HUD, 40 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$), to evaluate the risk from lead in the settled dust within the air handling units and tenant spaces. This is the federal residential standard used to determine whether children may re-enter an apartment after lead has been removed or abated, as children are much more susceptible than adults to the dangers posed by exposure to lead. Both AmTrust and NYCHA cleaned the air handling units and NYCHA spaces until all dust sample results were below 40 $\mu\text{g}/\text{ft}^2$.

The U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA), working closely with other federal, state, and local agencies, have been sampling the air, dust, water, river sediments and drinking water and analyzing them for the presence of pollutants such as asbestos, radiation, mercury and other metals, pesticides, PCBs, or bacteria that might create health hazards. Both agencies have taken hundreds of samples to monitor environmental conditions since September 11, and have found no evidence of any significant public health hazard to residents, visitors or workers beyond the immediate World Trade Center area (Ground Zero).

The EPA's and OSHA's findings indicate that the dust and particulate in the air in lower Manhattan does not contain hazardous materials at levels of concern. However, even dust containing no hazardous materials can cause respiratory and eye irritation. Because dust will continue to remain in the air during the ensuing clean-up efforts following the World Trade Center disaster, the Employee Health & Safety Compliance Office and Technical Services departments have developed a series of recommendations, see Conclusions and Recommendations.

AmTrust Realty Corporation: *Summary of Work*

AmTrust Realty is the owner/management agent for 250 Broadway and as such, has the primary responsibility for insuring that the 250 Broadway Building is safe for occupancy. Prior to reopening 250 Broadway on September 17, 2001, AmTrust followed both the New York City's Department of Citywide Administrative Services (DCAS) and Department of Environmental Protection (DEP) published procedures for reopening a building, after the disaster, in Lower Manhattan (see Attachment F for copies of those procedures). AmTrust performed the following maintenance activities prior to reopening the Building:

- ✓ Cleaned the Building's HVAC System (Air Handling Units)
- ✓ Cleaned the exterior vents that supply the Base Building HVAC and NYCHA supplemental HVAC Systems
- ✓ Replaced all filters throughout the Building's HVAC System (Note: the Building uses the highest performing particulate filters (85% to 95%) available for the System)
- ✓ Cleaned all surfaces throughout the Building's public spaces (e.g., lobbies) and tenant areas
- ✓ Flushed all domestic water systems
- ✓ Hired environmental consultants, "Glomar" and "Independent Monitoring and Analysis", to sample for asbestos and lead. No asbestos fibers were detected within the Building. See Attachment B for analytical results. Elevated lead in dust levels was found in several of the dust samples. Again, please be aware that NYCHA used the most protective standard under HUD, 40 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$), to evaluate the risk from lead in the settled dust within the air handling units and tenant spaces. This standard is used to determine whether children may re-enter an apartment after lead has been removed or abated. AmTrust cleaned the air handling units and NYCHA spaces until all dust sample results were below 40 $\mu\text{g}/\text{ft}^2$. The Laboratory Analytical Reports for the lead in dust samples can be found in Attachment D.

Please note that the New York City Department of Buildings found the building structurally sound.

New York City Housing Authority: *Summary of Work*

NYCHA's Technical Service Department and Employee Health & Safety Compliance Office worked closely with the AmTrust Realty Corporation (AmTrust) to insure that NYCHA's Offices in 250 Broadway were safe for re-occupancy by September 21, 2001. NYCHA performed the following prior to reopening 250 Broadway:

- ✓ Visually Inspected the HVAC System (Air Handling Units and Supply Ducts) and NYCHA rental spaces for damage and dust/debris. No damage or extraordinary dust accumulations were observed.
- ✓ Performed sampling for asbestos and lead in dust. No asbestos fibers were detected within the Building. See Attachment A for analytical results. Elevated lead in dust levels was found in several of the dust samples. Please be aware that NYCHA used the most protective standard under HUD, 40 micrograms of lead per square foot ($\mu\text{g}/\text{ft}^2$), to evaluate the risk from lead in the settled dust within the air handling units and tenant spaces. This standard is used to determine whether children may re-enter an apartment after lead has been removed or abated. NYCHA cleaned the air handling units and NYCHA spaces until all dust sample results were below 40 $\mu\text{g}/\text{ft}^2$. The Laboratory Analytical Reports for the lead in dust samples can be found in Attachment C.
- ✓ Performed an exposure assessment for lead on a worker cleaning the air handling units. The results were negative. The Laboratory Analytical Reports for the sample can be found in Attachment C.
- ✓ Power washed the exterior sidewalks and the building exterior up to the second floor
- ✓ Cleaned all Public Spaces through out the Building
- ✓ Cleaned within a 10 foot diameter of each supply duct diffuser and perimeter register in each NYCHA space
- ✓ Cleaned the Air Handling Units and pre-filters for the 4th Floor Computer Room

Please note that representatives of NYCHA's Construction Department found the building structurally sound.

United States Environmental Protection Agency: *Summary of Findings (Through October 9, 2001)*

U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA), working closely with other federal, state, and local agencies, have been sampling the air, dust, water, river sediments and drinking water and analyzing them for the presence of pollutants such as asbestos, radiation, mercury and other metals, pesticides, PCBs, or bacteria that might create health hazards. Both agencies have taken hundreds of samples to monitor environmental conditions since September 11, and have found no evidence of any significant public health hazard to residents, visitors or workers beyond the immediate World Trade Center area (Ground Zero). In response to public requests for more detailed information, EPA and OSHA are making the results of environmental and occupational sampling available on their sites on the World Wide Web (www.epa.gov and www.osha.gov), and will post additional data as it becomes available.

"EPA's website now has more detailed information on environmental monitoring information in New York City that should be very reassuring to residents, tourists and workers, and we will continue to update that site with information as it becomes available" said EPA Administrator Christine Whitman. "Our data show that contaminant levels are low or nonexistent, and are generally confined to the Trade Center site. There is no need for concern among the general public, but residents and business owners should follow recommended procedures for cleaning up homes and businesses if dust has entered."

On the whole, despite questions about potential contaminants from the Trade Center site, EPA and OSHA data indicates there is no cause for general public concern. Residents and workers returning to buildings where dust from the Trade Center has entered the building should follow proper procedures, which was done at 250 Broadway, in cleaning buildings, but the general public should feel very reassured about the extensive environmental monitoring data that has been collected and analyzed.

Conclusions and Recommendations

Based upon the work performed by AmTrust, NYCHA staff and the EPA's and OSHA's published testing results, the Technical Service Department and the Employee Health & Safety Compliance Office found 250 Broadway to be safe for occupancy on September 17, 2001. The EPA's and OSHA's findings indicate that the dust and particulate in the air in lower Manhattan does not contain hazardous materials at levels of concern. However, in general dusts can cause respiratory symptoms and eye and throat irritation. Because dust will continue to remain in the air during the ensuing clean-up efforts following the World Trade Center disaster, Employee Health & Safety Compliance Office and Technical Services departments recommend the following course of action for the maintenance of 250 Broadway:

- ✓ *Testing and Balancing of the HVAC System:* Testing and balancing involves the testing, adjusting, and balancing of HVAC system components so that the entire system provides airflows that are in accordance with the design specifications. Typical components and system parameters tested include:
 - all supply, return, exhaust, and outdoor airflow rates
 - control settings and operation
 - air temperatures
 - fan speeds and power consumption
 - filter or collector resistance

The typical test and balance is designed to accomplish three goals: verify and ensure the most effective system operation within the design specifications, identify and correct any problems, and ensure the safety of the system. A test and balance report should provide a complete record of the design, preliminary measurements, and final test data. The report should include any discrepancies between the test data and the design specifications, along with reasons for those discrepancies.
- ✓ *Positively Pressurize the Building with the Minimum Amount of Outside Air:* Keeping the building positively pressurized will reduce the infiltration of unfiltered air into the building.
- ✓ *Weekly Visual Inspection of the HVAC System:* Tech Services Staff will visually inspect air handling units, filters and supply ducts for damage and/or dust build-up.
- ✓ *Maintain the Relative Humidity within the Building around 50%:* Moist Air can help reduce odors and help prevent our respiratory tracts from getting dry.
- ✓ *Integrate Dust Suppression Techniques into Building O&M:* Mop lobby twice daily, power wash side walk weekly and install dust mats (sticky mats) at lobby elevator entrances.
- ✓ *Indoor Air Quality (IAQ) Investigation:* AmTrust must hire a Certified Industrial Hygienist to perform a complete IAQ Investigation of the Building. Subsequent monitoring will be based upon the finding of the initial investigation.
- ✓ *Monitoring of EPA Testing Results:* Tech Services will monitor the EPA's published findings; if the EPA has a positive finding at one of its monitoring stations near 250 Broadway, Tech Services will request that AmTrust test 250 Broadway for that contaminant.

- ✓ *Formation of an IAQ Committee for the NYCHA Occupants of 250 Broadway:* The group can help to disseminate information about indoor air quality, bring potential problems to the attention of building staff and management, and foster a sense of shared responsibility for maintaining a safe and comfortable indoor environment. The group will be most successful if it represents the diverse interests in the building, including:
 - Building manager
 - Representative from Tech Services
 - Representative from Employee Health & Safety Compliance Office