



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF SOLID WASTE
AND EMERGENCY RESPONSE

MEMORANDUM

DATE: July 15, 2004

**SUBJECT: NYC data concealed by EPA and NYC after 9/11,
subsequently altered/selectively deleted by NYC**

-- Reverses IG finding of "no evidence ... EPA attempted to conceal"

-- Evidence not considered or evaluated in 8/21/03 EPA IG report

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CC: Affected parties and responsible officials

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A handwritten signature in black ink that reads "C. Jenkins".

The EPA Office of the Inspector General (IG) 8/21/03 report¹ found the following:

In regard to the monitoring data, we found no evidence that EPA attempted to conceal data results from the public. ... [p. 9, EPA IG report]

Preliminary results of EPA's sampling activities indicate no or very low levels of asbestos. ... [p. 17, EPA IG report]

EPA is relying on these findings to defend itself from litigation brought by those now suffering adverse health consequences from World Trade Center (WTC) exposures.

* The conclusions and opinions in this memorandum are those of the author and do not necessarily reflect those of the U.S. Environmental Protection Agency.

The evidence provided herein now proves that both EPA and NYC deliberately concealed, altered, falsified, and deleted data showing asbestos levels that both EPA and NYC declared unsafe.

By this memorandum, I am requesting that the EPA IG investigate EPA's role in this concealment and falsification as it would affect a reversal of the 8/21/03 IG findings, proving EPA's deliberate indifference for public safety after 9/11. In its 8/21/03 investigation, the EPA IG never addressed either the data in question or EPA's concealment and falsification of same.

EPA and NYC definition of hazardous levels of asbestos after WTC collapse

The definition of "hazardous levels of asbestos" is that declared by EPA itself in the aftermath of the WTC. This level is 70 structures per square centimeter (70 s/mm^2) for asbestos in air as measured by transmission electron microscopy (TEM).

NYC also verified their adherence to this same 70 s/mm^2 standard. Jessica Leighton, NYC Dept. of Health Assistant Commissioner, testified to this fact on 11/27/01.²

(As noted in my 12/19/01 and following memoranda and reports,³ and as confirmed in the 8/21/03 IG report, the level of 70 s/mm^2 is not an EPA safety standard, and too high to protect human health.)

Contents of this report

The concealment, deletions, and alteration of 9/11 asbestos data by NYC is discussed first. NYC provided an original version of its air asbestos data around 11/13/01 to the state of New York, but not to the public. NYC finally released the data to the public on its internet site in early 2002. The 2002 version of the data, however, deleted altogether or changed to "not detected" high asbestos levels.

This is followed by a discussion of EPA's concealment of the NYC data, in knowing disregard for the truth and the safety of the public.

The next section contrasts EPA's response to the WTC collapse to a July, 2004 event where the Washington DC Senate building was evacuated after a much less severe asbestos release.

Finally, documentation is given that even in the absence of any air testing data, EPA has a regulatory presumption there will be hazardous asbestos levels when any building is demolished by an implosion with subsequent fire. The EPA explicitly states that when the military uses buildings for target practice and a fire will ensue, then the EPA regulations take effect because of the presumed hazardous releases of asbestos.

This submission supplements my 7/4/03 report to the IG: "...A DOCUMENTARY BASIS FOR LITIGATION."⁴ At the time I prepared my 7/4/03 report, I was unaware of the fact that NYC had two different versions of its air monitoring data. It was only by chance that I noticed the discrepancies between the two versions.

Concealment, deletions and alterations of data by NYC

The NYC Department of Environmental Protection (DEP) concealed its own electron microscope (TEM) air asbestos data completely for many months after the WTC collapse. When it finally released this data, they deleted and altered significant high readings.

See the Appendix to this memorandum for a table showing the deletions and alterations of data from the original 11/13/01 version to the version released to the public sometime in early 2002.

NYC started testing asbestos levels in air one day after the disaster on 9/12/01.⁵ NYC would have had the results of the tests within a few hours of completion, because at that time, the laboratories were providing priority service to the 9/11 response. Samples were taken by couriers to the lab, who would often wait for results to convey back to their superiors.

NYC also would have conveyed the results to EPA. In a later section, verification is given that EPA was coordinating all of its testing directly with NYC at the time.

The two different versions of the NYC asbestos TEM data

11/13/01 FOIL response version of NYC data

NYC first gave their data to the NY State Department of Environmental Conservation (NYS DEC). Then, the NYS DEC transferred this data to an outside party in their 11/13/01 response to a Freedom of Information Law (FOIL) request.⁶ The FOIL response provided other data as well, including OSHA's, Con Edison's, NIOSH's, etc.

(The version of the NYC data which was included in the 11/13/01 FOIL response did not constitute a release to the public by NYC. It only shows that NYC released the data to the NYS DEC, a state agency.)

Altered web version (posted early 2002) of NYC data

Sometime before or during early 2002, NYC posted another version of its TEM asbestos data on its NYC Department of Environmental Protection website.

Earlier, by at least 10/24/01, NYC had posted PCM light microscope asbestos air data on its website. There was no indication at this time that the TEM electron microscope data even existed.⁷ The TEM results were the only ones related to EPA's and NYC's stated health benchmark of 70 s/mm² for the WTC disaster.

11/30 posted TEM

Summary of hazardous levels found between 9/12/01 and 9/29/01 using original NYC data

From the original version of the data, from 9/12/01 and 9/29/01, 52% of NYC's TEM tests were either over or presumed to be over 70 s/mm². There were 87 outdoor air tests reported by the NYC during this time period. Out of these, 45 were either over 70 s/mm² (16 tests) or classified as "overload" (29 tests). Many of these high test results were many blocks from Ground Zero, up to 10 blocks away to the north and northeast.

Any "overload" results should be presumed to be higher than 70 s/mm^2 for two reasons. First, "overload" means that there was such an excess of particulate material on the collection device that the laboratory could not even make a reading, meaning there was a high level of all particulates, including asbestos.

Second, whenever there were "overload" results from the TEM tests in early days, the corresponding tests at the same location using a light microscope (PCM) were much higher than the PCM levels where asbestos was verifiably over 70 s/mm^2 . In other words, paired tests looked like this:

	TEM electron microscope result	PCM light microscope result
Location A	45 s/mm^2	0.010 f/cc
Location B	157 s/mm^2	0.040 f/cc
Location C	overload	0.080 f/cc

Even if the "overload" results are ignored, then 18% of the 87 tests (16 out of 87) between 9/12/01 and 9/29/01 were over 70 s/mm^2 . This is significant.

In contrast, in its 10/3/01 press release, EPA claimed that only 6% (27 out of 442) air samples IN THE IMMEDIATE VICINITY of Ground Zero were over 70 s/mm^2 .⁸

Summary of deletions and alterations of the original NYC data

The Appendix to this memorandum compares the two different versions of the same NYC data.

Tests above 70 s/mm^2

NYC altered 6 of the original test results that showed asbestos over 70 s/mm^2 . NYC altered the data by either deleting the sampling location and accompanying data altogether, claiming that no asbestos was found (below the detection limit), or claiming that there were no TEM tests at the particular location for that day.

"Overload" tests

NYC altered 11 of the results that were overloaded. Overload means that there were such high levels of asbestos and other particulates in the test device that asbestos could not even be counted. As discussed earlier, overload samples are presumptive of concentrations over 70 s/mm^2 . NYC altered the data by either claiming that no asbestos was found (below the detection limit), or claiming that there were no TEM tests at the particular location for that day.

Tests where asbestos found, but below 70 s/mm^2

NYC also altered the tests results where asbestos was found in the air, but found at levels lower than 70 s/mm^2 . This is highly significant as well, because NYC as well as EPA were claiming that there was no detectable asbestos in most instances. The altered version of the

NYC data claimed that these levels were either "not detectable" (below the detection limit), or claimed that there were no TEM tests at the particular location for that day.

NYC concealment of high asbestos levels 7 blocks north/northeast of Ground Zero on 9/12/01

The NYC tests using TEM on 9/12/01 included 5 air samples as far away as 10 blocks north and northeast from the perimeter of Ground Zero. The following table shows the air levels which were above the 70 s/mm², and the changes made in the altered 2002 version.

After finding these alarming levels of airborne asbestos so far north of Ground Zero the day after the disaster, NYC never came back to retest to see if the levels had subsided. Much less did they warn anyone.

LOCATION	s/mm ²	COMMENT	DISTANCE/DIRECTION FROM Ground Zero
CENTRE & CHAMBERS ST.	123.73	123.73 data as well as sampling location deleted in NYC web version	7 blocks NE of GZ perimeter, east of Broadway.
SPRUCE & GOLD ST.	157.48	157.48 data as well as sampling location deleted in NYC web Version	7 to 8 blocks NE of GZ perimeter, east of Broadway
GREENWICH & CHAMBERS ST.	overload	"Overload" means that there was so much material on the sampling device, the laboratory could not make out the asbestos fibers. This data was included in 2002 version.	5 blocks north of GZ perimeter

High air levels on 9/12/01 were UPWIND from Ground Zero

NASA photographs on 9/12/01 show that the WTC plume was blowing from the northeast to the southwest, thus blowing the plume towards New Jersey on the day these high asbestos levels were found to the north-northeast of Ground Zero. The 9/13/01 EPA press release also states that Brooklyn was "downwind" from the WTC on 9/12/01.⁹

Thus it is surprising that the air levels could have been this high on 9/12/01 when the overhead winds were blowing to the southwest. Several explanations may be possible.

One explanation could be that the wind was resuspending the asbestos from the streets and roofs that had been deposited the day before from the initial dust cloud.

Another explanation might be that winds in and around the streets of NYC were turbulent, blowing in opposite directions, swirling through the canyons of NYC. The NYnet project of the Brookhaven National Laboratory is studying the canyon effect in NYC for distributing particulates in different directions from the overhead wind direction. This is to assist responses to dirty bomb and bioterrorism attacks.¹⁰

Motivation for NYC deletion of the Centre/Chambers as well as the Spruce/Gold data – concealment of fact that contamination went east of Broadway and north of Warren Street

In the altered 2002 version, NYC not only deleted the high levels of 123.73 and 157.48 for the Centre/Chambers and Spruce/Gold locations, it also deleted any mention of the fact that it had ever taken samples at these locations. This was true not only for the electron microscope data (TEM), but also for the light microscope (PCM) data that posted sometime before 10/24/01 on its web site.

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Both of these two locations are east of Broadway and north of Warren St. NYC was actively concealing the fact that any contamination had gone east of Broadway and north of Warren. See the following 9/17/01 NYC advisory to residents, which explicitly states there are no contamination concerns outside of these boundaries: ¹¹

If you were evacuated from a residence or workplace south of Warren Street, west of Broadway, and north of Exchange Street, and have been approved to resume tenancy by your building manager, you are advised to wear a dust mask upon entering this area to decrease the possibility of dust inhalation and throat irritation. Outside these boundaries, masks are not necessary, but may be worn for your own comfort. If there is dust present indoors, it should not be necessary to wear this mask if you follow the cleaning procedures detailed below. ...

Obscure early EPA data collaborates NYC data showing asbestos further north of Ground Zero

Early EPA data¹² collaborates the NYC findings of high asbestos further north from Ground Zero. Air monitoring was conducted at the EPA Region 2 building in NYC, which is 6 blocks northeast of the perimeter of Ground Zero. This EPA data is difficult to find, and EPA falsely claimed in a press release and other statements to the press that they were not concerned.

Significant levels of airborne asbestos were found, although not over EPA's 70 s/mm² standard of the time. See the table below:

9/13/01 EPA indoor asbestos testing	
s/mm ² - Only levels above the relatively high detection limit of 20 s/mm ² are given below	
20 s/mm ²	8 th floor, 290 Broadway, EPA Region 2 building, 6 blocks NE of GZ perimeter
20 s/mm ²	22 nd floor, south, 290 Broadway, EPA Region 2 building, 6 blocks NE of GZ perimeter
60 s/mm ²	Parking – LL-1, 290 Broadway, EPA Region 2 building, 6 blocks NE of GZ perimeter
20 s/mm ²	Parking – LL-2, 290 Broadway, EPA Region 2 building, 6 blocks NE of ZG perimeter
40 s/mm ²	lobby south, 26 Federal Plaza, 9 blocks NE from perimeter of ZG
40 s/mm ²	13th floor SE, 26 Federal Plaza, , 9 blocks NE from perimeter of ZG

See Section N of my 7/4/03 report¹³ for documentation of how these levels triggered an evacuation and professional cleaning of the EPA building the week after 9/11, while at the same time EPA was telling the press that there were no problems at the EPA building. EPA's response at its own building establishes that it found these levels to be significant indicators of contamination by WTC dust.

Original NYC data is what NYC and EPA believed to represent hazard after 9/11 – irrelevant of whether alterations and deletions were clerical or "more careful examination of data"

The alterations and deletions were not typographic errors, because they were one-sided, always showing lower or no asbestos levels, never the other way around.

NYC might offer the excuse that the altered/deleted data eventually posted on its web site represented more careful scrutiny of the laboratory results. Even EPA has conveniently "re-worked" the asbestos data to now show lower asbestos levels.

This argument, however, cannot hold sway. After 9/11, before any alterations of the data, NYC believed people were being exposed to the higher levels contained in the original version of the data, not the altered version released in early 2002. NYC did not warn anyone. Instead, they concealed the information.

EPA concealment of NYC data

EPA "no asbestos hazard" claim in press releases of 9/13/01 and 9/14/01

The following statements by EPA on 9/13/01 and 9/14/01 claim either no asbestos found or below levels of concern, the exact opposite of what the NYC data demonstrated:

Monitoring and sampling conducted on Tuesday and Wednesday have been very reassuring about potential exposure of rescue crews and the public to environmental contaminants. EPA's primary concern is to ensure that rescue workers and the public are not exposed to elevated levels of asbestos, acidic gases or other contaminants from the debris. Sampling of ambient air quality found either no asbestos or very low levels of asbestos. ... Additional sampling of both ambient air quality and dust particles was conducted Wednesday night in lower Manhattan and Brooklyn, and results were uniformly acceptable. "EPA is greatly relieved to have learned that there appears to be no significant levels of asbestos dust in the air in New York City," said Administrator Whitman. [EPA press release, 9/13/01, emphasis added]

The U.S. Environmental Protection Agency and the Department of Labor's Occupational Health and Safety Administration today announced that the majority of air and dust samples monitored at the crash site and in Lower Manhattan do not indicate levels of concern for asbestos. ... New OSHA data also indicates that indoor air quality in downtown buildings will meet standards. ... "Our tests show that it is safe for New Yorkers to go back to work in New York's financial district," said John L. Henshaw, Assistant Secretary of Labor for OSHA. ... [EPA press release, 9/14/01, emphasis added]

NYC data compared to EPA statements

The following table compares EPA's statements about asbestos levels in air following 9/11 with the actual NYC data.¹⁴ As discussed earlier, any "overload" results should be presumed higher than 70 s/mm².

The difference between the EPA statements and the NYC data are remarkable. EPA's statements represent knowing falsifications in reckless disregard for the truth. EPA had the NYC data, as documented later.

DATE	EPA STATEMENTS	NYC ASBESTOS LEVELS over 70 s/mm ² by TEM (from original unaltered NYC version)
9/12	The E.P.A.'s administrator, Christie Whitman, said in a telephone interview from Washington ... stressed that the asbestos levels, too, were a concern only for rescue workers and work crews who will be involved day after day directly at the site, and not for residents nearby. ... [Challenges and Dangers in Disposing of Two Fallen Giants, 9/13/01, NY Times, interview presumed to have taken place on 9/12/01, day before publication in NY Times]	overload - GREENWICH & CHAMBERS ST., 5 blocks north of GZ perimeter 123.73 s/mm ² - CENTRE & CHAMBERS ST., 7 blocks NE of GZ perimeter, east of Broadway 157.48 s/mm ² - SPRUCE & GOLD ST., 7 to 8 blocks NE of GZ perimeter, east of Broadway
9/13	Monitoring and sampling conducted on Tuesday and Wednesday have been very reassuring about potential exposure of rescue crews and the public to environmental contaminants. EPA's primary concern is to ensure that rescue workers and the public are not exposed to elevated levels of asbestos, acidic gases or other contaminants from the debris. Sampling of ambient air quality found either no asbestos or very low levels of asbestos. ... Additional sampling of both ambient air quality and dust particles was conducted Wednesday night in lower Manhattan and Brooklyn, and results were uniformly acceptable. "EPA is greatly relieved to have learned that there appears to be no significant levels of asbestos dust in the air in New York City," said Administrator Whitman. [EPA press release, 9/13/01] Most Recent Results (as of 7:00 p.m., 9/13). EPA's Thursday sampling [9/13/01] focused on indoor air quality in several buildings in the area of the World Trade Center. ... All of the asbestos levels were below the OSHA exposure limit ... EPA took an outdoor air sample at One Chase Plaza (between Pine, Liberty, Nassau and Williams Streets). The asbestos concentration was also well below the threshold of concern. ... [9/14/01 "Daily Summary"]	overload - MURRAY & CHURCH ST., 3 blocks NNE of Ground Zero perimeter overload - FULTON & CHURCH ST., 1 block E of Ground Zero perimeter [EPA data] 60 s/mm ² -- parking, LL-2, EPA Region 2 building, 290 Broadway, 6 blocks NE of Ground Zero perimeter [EPA evacuated building week after 9/11 for professional abatement] [EPA data] 40 s/mm ² -- lobby south, 26 Federal Plaza, 9 blocks NE from perimeter of Ground Zero. [EPA data] 40 s/mm ² -- 13 th floor SE, 26 Federal Plaza, 9 blocks NE from perimeter of Ground Zero
9/14	The U.S. Environmental Protection Agency and the Department of Labor's Occupational Health and Safety Administration today announced that the majority of air and dust samples monitored at the crash site and in Lower Manhattan do not indicate levels of concern for asbestos. ... New OSHA data also indicates that indoor air quality in downtown buildings will meet standards. ... "Our tests show that it is safe for New Yorkers to go back to work in New York's financial district," said John L. Henshaw, Assistant Secretary of Labor for OSHA. ... [EPA press release, 9/14/01]	overload - CEDAR & TRINITY PL. [same as Trinity Pl. & Thames], 1 blocks S of Ground Zero perimeter

9/15	Samples From Air Monitors in and Around "Ground Zero" ... Out of 31 analyzed – 6 were marginally above the 70 s/mm ² structures per millimeter squared that we use to clear schools after asbestos removal under AHERA. ... [9/15/01 "Press Information" sheet]	overload - MURRAY & GREENWICH, 3 blocks N of Ground Zero perimeter 120.18 s/mm² - MURRAY & CHURCH ST., 3 blocks NNE of Ground Zero perimeter overload - MURRAY BETWEEN CHURCH & BROADWAY, 3 1/2 blocks NE of Ground Zero perimeter overload - BROADWAY & MURRAY ST., 4 blocks NE of Ground Zero perimeter overload - GREENWICH & PARK PL., 2 blocks N of Ground Zero perimeter overload - VESEY BETWEEN CHURCH & GREENWICH ST., at north perimeter of Ground Zero overload - FULTON & CHURCH ST., at east-northeast perimeter of Ground Zero 131.23 s/mm² - FULTON BETWEEN CHURCH & BROADWAY, 1/2 block E of Ground Zero perimeter overload - LIBERTY ST. & BROADWAY, 1 block SE of Ground Zero perimeter overload - CEDAR ST. & BROADWAY, 2 blocks SE of Ground Zero perimeter
9/16	All samples taken from nine permanent air monitors in and around ground zero were, for the most part, below background levels. One samples, taken from the "hot zone" – an area accessed only by response workers – was above EPA's very protective standard of 70 s/mm ² structures per square millimeter. ... While the level found in the sample was not considered high, EPA continues to advise personal protective equipment for the emergency response workers. [9/16/01 "Daily Summary". Note EPA does not issue warning for residents and others	102.36 s/mm² - WASHINGTON & PARK PLACE, 1 block N of Ground Zero perimeter 78.74 s/mm² - MURRAY & GREENWICH, 3 blocks N of Ground Zero perimeter 78.74 s/mm² - MURRAY & CHURCH ST., 3 blocks NNE of Ground Zero perimeter overload - MURRAY BETWEEN CHURCH & BROADWAY, 3 1/2 blocks NE of Ground Zero perimeter overload - VESEY ST BETWEEN CHURCH & W.BROADWAY, at north perimeter of Ground Zero overload - FULTON & CHURCH ST., east-northeast perimeter of Ground Zero overload - FULTON BETWEEN CHURCH & BROADWAY, 1/2 block E of Ground Zero perimeter overload - LIBERTY ST. & BROADWAY, 1 block SE of Ground Zero perimeter overload - CEDAR ST. & BROADWAY, 2 blocks SE of Ground Zero perimeter
9/17	Air samples taken from nine permanent air monitors in and around ground zero were, for the most part, below background levels. One sample taken from the "hot zone" – an area accessed only by response workers – was above EPA's very protective standard of 70 s/mm ² structures of asbestos per	overload - FULTON & CHURCH ST., at east perimeter of Ground Zero overload - LIBERTY ST. & BROADWAY, 1 block SE of Ground Zero perimeter

	square millimeter. ... [9/17/01 "Daily Summary"]	
9/18	In the recent rounds of ambient air sampling, 21 samples were collected and analyzed from 11 monitoring sites (one new monitor was has [sic] been added). Four of these samples had levels of asbestos that were marginally above the level that EPA is using as a level of concern. EPA continues to advise personal protective equipment for the emergency response workers. [9/18/01 "Daily Summary". Note no warning for residents.] "We are very encouraged that the results from our monitoring of air quality and drinking water conditions in both New York and near the Pentagon show that the public in these areas is not being exposed to excessive levels of asbestos or other harmful substances," Whitman said. A Given the scope of the tragedy from last week, I am glad to reassure the people of New York and Washington, D.C. that their air is safe to breath and their water is safe to drink," she added. ... Thus far, from 50 air samples taken, the vast majority of results are either non-detectable or below established levels of concern for asbestos, lead and volatile organic compounds. The highest levels of asbestos have been detected within one-half block of ground zero, where rescuers have been provided with appropriate protective equipment. ... [EPA press release, 9/18/01]	110.24 s/mm2 - MURRAY & CHURCH ST., 3 blocks NNE of Ground Zero perimeter 157.48 s/mm2 - WEST ST & VESEY ST., NW corner of Ground Zero perimeter overload - FULTON & CHURCH ST., east perimeter of Ground Zero overload - LIBERTY ST. & CHURCH ST., SE perimeter of Ground Zero
9/19	EPA's most recent rounds of air samples from 11 fixed monitoring sites in and around the "hot zone" were below the EPA limit for asbestos. This bring the total number of samples taken from fixed monitors to 68. ... [9/19/01 "Daily Summary"] The majority of EPA's most recent rounds of air samples from 11 fixed monitoring sites in and around the "hot zone" were below the EPA limit for asbestos. Out of 25 samples analyzed yesterday, one sample did indicate a slightly elevated level of asbestos from a monitoring station located one block from ground zero. [9/20/01 "Daily Summary"]	149.61 s/mm2 - WEST ST & WARREN ST., 4 blocks N of Ground Zero perimeter 122.48 s/mm2 - MURRAY & CHURCH ST., 3 blocks NNE of Ground Zero perimeter overload - NORTH END AVE & VESEY ST., 3 blocks NW of Ground Zero perimeter overload - FULTON & CHURCH ST., at east perimeter of Ground Zero overload - SOUTH END AVE & ALBANY ST, 3 blocks SW of Ground Zero perimeter overload - WEST ST & ALBANY, 2 blocks S of Ground Zero perimeter
9/20	None of the 29 samples analyzed for asbestos over the last two days showed detectable levels of this chemical. ... [9/21/01 "Daily Summary"]	
9/21	In the most recent sampling rounds, EPA analyzed 13 samples for asbestos. Five of the 13 samples were above the 70 s/mm² structures per square millimeter standard that EPA uses to clear schools for re-occupation after asbestos removal. All were taken in or in very close proximity to the excluded area around the World Trade Center. ... [9/22/01 "Daily Summary"] ... MONITORING EFFORTS CONTINUE TO SHOW SAFE DRINKING WATER, AIR ... U.S. Environmental Protection Agency (EPA) Administrator Christie Whitman announced today that the most detailed results to date of ongoing monitoring of drinking water in New York City provide additional reassurance that residents and people who work	78.74 s/mm2 - WEST ST & WARREN ST., 4 blocks N of Ground Zero perimeter overload - GATEWAY PLAZA PARK AREA, 3 blocks W of Ground Zero perimeter 78.74 s/mm2 - THIRD PLACE & BATTERY PL - WATERSIDE, 6 blocks SW of Ground Zero perimeter

	within the city are not being exposed to contaminants such as asbestos, radiation, mercury and other metals, pesticides, PCBs and bacteria. "EPA has been very aggressive in monitoring for potential environmental problems in the aftermath of the World Trade Center attack, and I am very pleased by what we've discovered. New Yorkers and New Jersians need not be concerned about environmental issues as they return to their homes and workplaces," Whitman said. "Air quality monitoring data in residential areas has been consistently reassuring. ... Only seven samples taken at or near ground zero have had marginally higher levels of asbestos that exceed EPA's level of concern ... Ambient air monitoring in the Financial District, where this week people have returned to work, show mostly no detectable levels of asbestos, or in a few isolated instances, levels of asbestos that are below EPA=s levels of concern. ... Available results continue to show that rescue workers at the disaster site are not being exposed to hazardous materials. ... [EPA press release, 9/21/01]	
9/22	Sept 22, 4PM – Sept 23, 4AM) ... 5 samples (all perimeter samples) ... no samples exceeded the TEM (AHERA) standard. [9/25/01 "Air/Bulk/Wipe/Water Sampling Situation Report]	
9/23	Sept 23, 4AM – Sept 23, 4PM) ... 1 sample above the TEM (AHERA) standard (Location ... corner of Albany and West) ... [9/25/01 "Air/Bulk/Wipe/Water Sampling Situation Report	overload - FULTON & CHURCH ST., east perimeter of Ground Zero overload - TRINITY PL. & THAMES ST., 1 block S of Ground Zero perimeter
9/24	Sept 23, 2PM – Sept 24, 2AM) ... 1 sample above the TEM (AHERA) standard (Location ... Albany and South End) [9/25/01 "Air/Bulk/Wipe/Water Sampling Situation Report]	78.74 s/mm2 - WEST ST & ALBANY, 2 blocks S of Ground Zero perimeter 131.23 s/mm2 - RECTOR PLACE BY THE PARK, 2 blocks S of Ground Zero perimeter

Documentation that EPA had timely access to and knowledge of the NYC data

There is ample documentation to demonstrate that EPA had the NYC data as it was being generated. Results of asbestos air monitoring tests were available within hours of the individual tests being completed.¹⁵

EPA has stated that they were coordinating their asbestos air testing with NYC in their 9/14/01 "Daily Summary"¹⁶ and then again in their 9/18/01 press release issued by Headquarters.¹⁷ However, subsequent "Daily Summaries only described EPA and NYC joint sampling efforts for dioxins, water, and other environmental media, and were totally silent about any coordination with NYC on air asbestos testing.

The following are EPA's statements about their interaction with NYC on testing:

EPA will also be coordinating additional weekend air monitoring with New York City and New York State. [9/14/01 "Daily Summary]

In the aftermath of last Tuesday's attacks, EPA has worked closely with state, federal and local authorities to provide expertise on cleanup methods for hazardous materials, as well as to detect whether any contaminants are found in ambient air quality monitoring, sampling of drinking water sources and sampling of runoff near the disaster sites. At the request of FEMA, EPA has been involved in the cleanup and site monitoring efforts, working closely with the U.S. Coast Guard, the Centers for Disease Control (CDC), the Occupational Safety and Health Administration (OSHA) and state and local organizations. ... [EPA press release, 9/18/01]

EPA will join the city to sample the drinking water distribution system below 14th Street. ... The city DEP [Department of Environmental Protection] will split the samples with EPA for their own analysis. ... [9/15/01 "Press Information" sheet described coordination of sampling with NYC]

EPA and the New York City Department of Environmental Protection (NYCDEP) jointly sampled the drinking water distribution system below 14th Street. ... NYCDEP split samples with EPA ... [9/16/01 "Daily Summary"]

EPA and the NYC DEP sampled drinking water at 13 distribution points in lower Manhattan on September 15. ... We are awaiting some of the results for PCB's, haloacetic acids and radionuclides, but all other results (chemical and biological) for drinking water constituents show no exceedences ... [9/18/01 "Press Information"]

EPA and the New York City Department of Environmental Protection (NYCDEP) sampled drinking water at 13 distribution points and not at the tap ...

The city will be sampling from several water tanks located on the top of buildings. They have requested that we facilitate the analysis of these samples for asbestos and PCBs. [9/18/01 "Daily Summary"]

Results from lower Manhattan drinking water samples taken by EPA and New York City were received. Asbestos was not detected in any of the samples, nor was any bacterial contamination. ... [9/19/01 "Daily Summary"]

Results from EPA analysis of samples taken by New York City at several water tanks located on the top of buildings indicated no detectable asbestos or PCB's. The city has directed buildings with water tanks to flush tanks ... [9/20/01 "Daily Summary"]

EPA and the city are evaluating an interim plan to collect any debris that might run off the site into the rivers. ... [9/21/01 "Daily Summary"]

EPA 9/11 response compared to recent evacuation of Senate after asbestos release

EPA and NYC concealed, altered, and deleted data showing asbestos after the collapse of the WTC. They did not admit that either residents or workers were being exposed to levels over their standard of 70 s/mm². They did not advise anyone to evacuate as a precaution until it could be assured that nobody would be exposed.

This is in stark contrast to a very recent event of a much lower asbestos risk in the U.S. Senate building in Washington, DC. This event took place 7/7/04.¹⁸ The Senate chambers were promptly evacuated after it was found that air levels were 99 s/mm² in only one air test. See the following news report:

The Senate's cloakrooms and press gallery were reopening Wednesday, a day after they had been shut down because asbestos was detected in the adjacent Senate chamber. ...

A piece of the fiber was discovered in the chamber's ventilation system Sunday night as work on an asbestos abatement project was ending, said Eva Malecki, spokeswoman for the Capitol architect's office.

Tests in the chamber found readings as high as 99 structures per square millimeter. Federal law considers anything above 70 to be a problem. A structure is an asbestos particle or piece of a particle. Officials realized Tuesday that similar problems might exist in the cloakrooms and press gallery because they share some auxiliary ducts with the chamber, Malecki said. Reporters and press gallery staff were told to leave the gallery at about 1 p.m. EDT. ...

The response to the Senate contamination problem was appropriate and within guidelines and regulatory standards set by EPA. The response to the WTC collapse was not. Furthermore, citizens were being exposed to many other contaminants in addition to asbestos after 9/11, which should have caused even greater concern.

EPA presumption: asbestos hazard from implosions/fires

Regardless of whether or not EPA had data showing hazardous levels of asbestos at the time of their early statements, there is an established EPA presumption there will be hazardous levels if a building implodes with an ensuing fire.

EPA has regulatory guidance under the Clean Air Act asbestos standards (National Emission Standards for Hazardous Air Pollutants) which requires removal of all asbestos from a building if it is going to be demolished by an implosion with the subsequent possibility of a fire.

To the point, EPA states that if the military is going to use a building for target practice, and a fire may result, then asbestos materials must be removed first:¹⁹

EXPLOSIONS/IMPLOSIONS Building implosions utilizing explosive devices constitute a rarely-used demolition technique. In simplest form, this method is accomplished through the use of explosive charges placed strategically throughout a building so that the building collapses in on itself and debris does not radiate outward to any appreciable distance. Relatively large quantities of dust are created, however, and the direction and magnitude of transport are matters of concern. ...

The destruction of buildings during military target practice is considered to be another form of explosive demolition. Category I materials may remain in place during target practice. However, if it can be expected that the building and ACM will burn as a result of explosive demolition, the ACM must be removed prior to demolition.

Thus, EPA did not need any testing to know that there would be an asbestos hazard in lower Manhattan after 9/11. In the absence of data or even if there was limited non-statistical data, EPA should have evacuated the areas impacted by the WTC dust cloud and plume.



ENDNOTES

¹ EPA (August 21, 2003) Evaluation Report EPA's Response to the World Trade Center Collapse: Challenges, Successes, and Areas for Improvement Report No. 2003-P-00012.
http://www.epa.gov/oig/reports/2003/WTC_report_20030821.pdf

² Leighton, J. (November 27, 2001) Remarks of Jessica Leighton, Ph.D.... before the New York State Assembly Standing Committee on Environmental Conservation Standing Committee on Health Standing Committee on Labor.

<http://nyc.gov/html/doh/html/public/testi/era1126.html>

"The standards or tolerance levels that are being used to evaluate the environmental tests are very conservative. For example, no outdoor air standards are available for asbestos. Thus, early on, the agencies jointly decided to use the most conservative standard available - the standard that is required for re-entry into schools after asbestos removal."

³ Technical memoranda in which I documented that the 70 s/mm² is not a health-based level, and only a detection limit of a test method are as follows:

12/19/01 memorandum "Wipe sampling ... Projection of airborne levels ... Estimation of increased cancer risks ..." may be found at the following web sites:

<http://911digitalarchive.org/objects/105.pdf>

<http://www.nyenvirolaw.org/PDF/Jenkins-12-19-01-WTCriskAssessment.pdf>

1/11/01 memo "PRELIMINARY ASSESSMENT, Asbestos in Manhattan compared to Libby Superfund site..." may be found at the following sites:

<http://911digitalarchive.org/collections/reports>

<http://www.nyenvirolaw.org/PDF/WTC-Libby-Jenkins-01-11-02.pdf>

<http://911digitalarchive.org/webcontent/nycosh/WTCcatasDecJan/WTC-Libby-Jenkins-01-11.pdf>

2/10/02 memo "NYC DEPARTMENT OF HEALTH MISREPRESENTATIONS" may be found at the following sites:

http://qcpages.qc.edu/CBNS/asbestos_references.pdf

http://www.nyenvirolaw.org/PDF/DOH-Jenkins-2-10-02-with_attachments.pdf

http://www.stuypa.org/environment/DOH-Jenkins-2-10-02-with_attach.pdf

⁴ Jenkins, C. (July 4, 2003) Comments on the EPA Office of Inspector General's 1/27/03 interim report titled: "EPA's Response to the World Trade Center Towers Collapse" A DOCUMENTARY BASIS FOR LITIGATION, prepared by Cate Jenkins, Ph.D., Environmental Scientist, Waste Identification Branch, Hazardous Waste Identification, Office of Solid Waste Office of Solid Waste and Emergency Response, EPA. Available from author at Jenkins.cate@epa.gov or posted at the following web addresses:

<http://www.nyenvirolaw.org/PDF/Jenkins-7-4-03-documentary-d2.pdf>

<http://nycosh.org/Jenkins-7-4-03-documentary-d.pdf>

⁵ The statement in my 7/4/03 report on page 24 ("The NYC Department of Environmental Protection first took its first asbestos air samples on 9/14, and then for only 2 air samples from Brooklyn.") is incorrect. I was unaware of the earlier NYC DEP data at the time I wrote the 7/4/03 report.

⁶ The full 11/13/01 FOIL response may be found at the following exact web address. You must paste in this full web address, as there are no current links within the www.nyenvirolaw.org web site to it. This is a very large document and takes a long time to load.

<http://www.nyenvirolaw.org/PDF/DEC-WTC-monitoringDATA.pdf>

The full NYS DEC FOIL response of 11/13/01 was posted on the www.NYenviroLAW.org web site some time between 1/22/02 and 6/4/04. This can be ascertained by looking at the different internet archived versions of this website at www.archive.org ("The WayBack Machine").

The 11/13/01 FOIL was first found listed on the 6/4/04 archive; the immediately previous archive of 1/22/02 did not include the document. The archived web page which includes this document under the title: "NY State Department of Environmental Conservation report on WTC Monitoring Data" may be found at the following web address.

<http://web.archive.org/web/20020604173052/http://nyenvirolaw.org/>

⁷ The 10/24/01 archived version of the NYC DEP website showing asbestos levels did not provide any TEM asbestos data whatsoever. Only the PCM light microscope data was given. See archived NYC DEP website for 10/24/01 at www.archive.org at the following exact URL:

<http://web.archive.org/web/20011024072502/www.nyc.gov/html/dep/html/airdata.html>

This is also true for the NYC DEP web data that was captured by www.archive.org on 11/7/01, and 2/2/02.

⁸ EPA (October 3, 2001) EPA and OSHA Web Sites Provide Environmental Monitoring Data From World Trade Center and Surrounding Areas. Data Confirms No Significant Public Health Risks; Rescue Crews and Nearby Residents Should Take Appropriate Precautions Data through September 30, 2001.

<http://www.epa.gov/wtc/summaries/epa-osh01.htm>

⁹ EPA (9/13/01) Headquarters Press Release, Washington, DC, For Release 09/13/2001, EPA INITIATES EMERGENCY RESPONSE ACTIVITIES, REASSURES PUBLIC ABOUT ENVIRONMENTAL HAZARDS, www.epa.gov]

The levels of lead, asbestos and volatile organic compounds in air samples taken on Tuesday in Brooklyn, downwind from the World Trade Center site, were not detectable or not of concern. Additional sampling of both ambient air quality and dust particles was conducted Wednesday night in lower Manhattan and Brooklyn, and results were uniformly acceptable.

¹⁰ NYnet project of the Urban Atmospheric Observatory, Brookhaven National Laboratory project for modeling particulate dispersion in NYC after a bioterrorism or dirty bomb is described at:

<http://www.uao.bnl.gov/mesonet/>

The following photo is described in this NYnet project as being the effect of a "sea breeze" effect, where surface winds from the sea force plumes nearer the surface to go in the opposite direction from plumes released higher up.



Another dramatic picture of a plume changing directions depending on how high up it is can be seen on the main page of the Urban Atmospheric Observatory at: <http://www.uao.bnl.gov>



¹¹ NYC Department of Health (September 17, 2001) HEALTH DEPARTMENT OFFERS RECOMMENDATIONS FOR INDIVIDUALS REOCCUPYING COMMERCIAL BUILDINGS AND RESIDENTS RE-ENTERING THEIR HOMES

<http://www.ci.nyc.ny.us/html/doh/html/alerts/wtc3.html>

¹² Early EPA asbestos data for 9/12/01 through 9/14/01 is available only on the "EPA On Scene Coordinator" website, through a report not generated until March 2002 or formally transmitted to EPA until 1/31/03.

Miller, D. (January 31, 2003) Transmittal memorandum from D. Miller (Lockheed Martin Technical Services) to R. Singvh (EPA). Report title: Analytical Report, World Trade Center Emergency Response (Asbestos), report dated March 2002.

http://www.epaosc.org/doc_list.asp?site_id=WTC

Only air asbestos data for 9/14/01 and later is available on the www.epa.gov/wtc website.

The EPA website does not contain any of the EPA's air testing data before the samples started at 8:00 PM on the night of 9/14/01. The tests took 12 hours, because a large volume of air had to be pulled through the monitoring device. Both EPA's spreadsheet version of its air asbestos data, as well as their map-linked versions of the same data posted at www.epa.gov/wtc did not include any air asbestos data before this time.

¹³ web posting locations given earlier in endnotes

¹⁴ For all EPA press releases, see www.epa.gov, then go to the "Newsroom".

Scanned versions of the hard copy "Daily Summaries" may be found at the following web site: www.NYenviroLAW.org. After 9/30/01, EPA summarized all the Daily Summaries into one document for posting on its web at http://www.epa.gov/wtc/data_summary.htm. However, not all the information was included.

¹⁵ The fast laboratory turnaround time, within hours, for asbestos has been documented. The 9/15/01 "Daily Summary ..." by EPA stated the following:

EPA has established nine permanent air monitoring station in and around ground zero. These monitors are taking samples in 12-hour intervals and are being tested for asbestos. Samples have been sent to a lab, and results are expected late morning. ...

EPA started taking its first air samples at 8:00 PM on 9/14/01, and stopped the test at 8:00 AM on 9/15/01. This "Daily Summary" says on 9/15/01 that EPA will be getting the results within a few hours. This information comes from the spread sheet version of the asbestos air data posted at www.epa.gov/wtc.

Combining these two facts documents the fast turnaround time for asbestos results by the laboratory, and thus that NYC as well as EPA would have been aware of the NYC test results within hours.

Scanned versions of the hard copy "Daily Summaries" may be found at the following web site: www.NYenviroLAW.org. After 9/30/01, EPA summarized all the Daily Summaries into one document for posting on its web at http://www.epa.gov/wtc/data_summary.htm. However, not all the information was included.

¹⁶ Scanned versions of these documents may be found at the following web site: www.NYenviroLAW.org

¹⁷ For all press releases, see www.epa.gov, then go to the "Newsroom".

¹⁸ Associated Press (July 7, 2004) Senate rooms to reopen after cleanup.

<http://seattlepi.nwsource.com/printer/ap.asp?category=1153&slug=Capitol%20Asbestos>

¹⁹ EPA (1992) Demolition Practices Under the Asbestos NESHAP, EPA Pub. 340/1-92-013,

<http://yosemite.epa.gov/r5/r5ard.nsf/0/1369426e173932de862566020058a60f?OpenDocument>

APPENDIX

COMPARISON OF TWO VERSIONS OF SAME NYC ASBESTOS AIR DATA

11/13/01 VERSION versus NYC DEP 2002 WEB SITE VERSION

Electron microscope (TEM) asbestos air test by the NYC Department of Environmental Protection (DEP) after 9/11. Two different versions of same data, from two sources described in greater detail at end of this table.

Only sampling locations included are those where electron microscope (TEM) asbestos data was provided in the NYS DEC FOIL response, which were from 9/12/01 to 9/29/01. There were light microscope asbestos (PCM) results for additional locations and days, but are not included here.

DATE - Location No.	LOCATION	TEM (electron microscope) ASBESTOS AIR LEVELS, s/mm2	COMMENTS
9/12/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
1	W.BROADWAY & WORTH ST.	11.25	9/12 was only day where this location was sampled.
2	BROADWAY & WORTH ST.	44.99	9/12 was only day where this location was sampled.
6	GREENWICH & CHAMBERS ST.	overload	"Overload" means that there was so much material on the sampling device, the laboratory could not make out the
	CENTRE & CHAMBERS ST.	123.73	123.73 data as well as sampling location deleted in NYC
	SPRUCE & GOLD ST.	157.48	157.48 data as well as sampling location deleted in NYC
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
1	W.BROADWAY & WORTH ST	11.25	
2	BROADWAY & WORTH ST	44.99	
6	GREENWICH & CHAMBERS	Overload	
9/13/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
12	MURRAY & CHURCH ST.	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
21	FULTON & CHURCH ST.	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
25	LIBERTY & CHURCH ST.	[left blank in web version]	
28	WASHINGTON & CEDAR ST.	[left blank in web version]	
9/14/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
15	PARK & GREENWICH ST. - APPROX. 50 FT. FROM	not detected, <6.56	
25	LIBERTY & CHURCH ST.	4.32	4.32 data deleted from NYC web version
29	CEDAR & TRINITY PL. [same as Trinity Pl. & Thames]	overload	
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
15	PARK PL. & GREENWICH	NA	
25	LIBERTY & CHURCH ST.	[left blank in web version]	
29	TRINITY PL. & THAMES ST.	Overload	

9/15/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
11	MURRAY & GREENWICH	overload	
12	MURRAY & CHURCH ST.	120.18	
13	MURRAY BETWEEN CHURCH	overload	
14	BROADWAY & MURRAY ST.	overload	
15	GREENWICH & PARK PL.	overload	
20	VESEY BETWEEN CHURCH & GREENWICH ST.	overload	both data and sampling location deleted in NYC web version
21	FULTON & CHURCH ST.	overload	
22	FULTON BETWEEN CHURCH & BROADWAY	131.23	131.23 data deleted in NYC web version
26	LIBERTY ST. & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
30	CEDAR ST. & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02) <i>1/21-1/26/02 added TCM additional</i>			
11	MURRAY & GREENWICH ST.	Overload	
12	MURRAY & CHURCH ST.	120.18	
13	MURRAY BETWEEN CHURCH	Overload	
14	BROADWAY & MURRAY ST	Overload	
15	PARK PL. & GREENWICH	Overload	
21	FULTON & CHURCH ST.	Overload	
22	FULTON BETWEEN CHURCH		
26	LIBERTY ST. & BROADWAY	[left blank in web version]	
30	CEDAR ST. & BROADWAY	[left blank in web version]	
9/16/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
	WASHINGTON & PARK PLACE	102.36	both data and sampling location deleted in NYC web
11	MURRAY & GREENWICH	78.74	
12	MURRAY & CHURCH ST.	78.74	
13	MURRAY BETWEEN CHURCH	overload	
20	VESEY ST BETWEEN	overload	
21	FULTON & CHURCH ST.	overload	
22	FULTON BETWEEN CHURCH & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
26	LIBERTY ST. & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
30	CEDAR ST. & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
11	MURRAY & GREENWICH ST.	78.74	
12	MURRAY & CHURCH ST.	78.74	
13	MURRAY BETWEEN CHURCH	Overload	
20	VESEY ST BETWEEN	Overload	
21	FULTON & CHURCH ST.	Overload	
22	FULTON BETWEEN CHURCH & BROADWAY	[left blank in web version]	
26	LIBERTY ST. & BROADWAY	[left blank in web version]	
30	CEDAR ST. & BROADWAY	[left blank in web version]	

9/17/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
11	MURRAY & GREENWICH	61.24	
12	MURRAY & CHURCH ST.	43.74	
21	FULTON & CHURCH ST.	overload	
26	LIBERTY ST. & BROADWAY	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
11	MURRAY & GREENWICH ST.	61.24	
12	MURRAY & CHURCH ST.	43.74	
21	FULTON & CHURCH ST.	Overload	
26	LIBERTY ST. & BROADWAY	[left blank in web version]	
9/18/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
7	WARREN ST & NORTH END	52.49	52.49 data altered to "no analysis" in NYC web version
11	MURRAY & GREENWICH ST.	not detected, not detected,	
12	MURRAY & CHURCH ST.	110.24	
19	WEST ST & VESEY ST.	157.48	
21	FULTON & CHURCH ST.	overload	
25	LIBERTY ST. & CHURCH ST.	overload	"Overload" (meaning too high a level to even quantify) data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
7	WARREN ST & NORTH END	NA	
11	MURRAY & GREENWICH ST.	not detected,	
12	MURRAY & CHURCH ST.	110.24	
19	VESEY & WEST ST.	157.48	
21	FULTON & CHURCH ST.	Overload	
25	LIBERTY & CHURCH ST.	[left blank in web version]	
9/19/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
4	RIVER TERRACE &	6.75	6.75 data altered to "below detection limit" in NYC web
8	WEST ST & WARREN ST.	149.61	
10	NORTH END AVE & PARK PL WEST	not detected, not detected,	
12	MURRAY & CHURCH ST.	122.48	
17	RIVER TERRACE & VESEY ST.	17.5	
17A	NORTH END AVE & VESEY ST.	overload	
21	FULTON & CHURCH ST.	overload	
27	GATEWAY PLAZA PARK AREA	31.5	
31	SOUTH END AVE & ALBANY	overload	
32	WEST ST & ALBANY	overload	"Overload" (meaning too high a level to even quantify) data altered to "below detection limit" in NYC web
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
4	RIVER TERRACE & CHAMBERS ST	not detected, not detected, 149.61	
8	WEST ST & WARREN ST.	149.61	
10	NORTH END AVE & PARK PL	not detected,	
12	MURRAY & CHURCH ST.	122.48	

17	RIVER TERRACE & VESEY ST	17.5	
17A	NORTH END AVE & VESEY ST.	Overload	
21	FULTON & CHURCH ST.	Overload	
27	GATEWAY PLAZA PARK AREA	31.5	
31	SOUTH END AVE & ALBANY	Overload	
32	WEST ST & ALBANY	not detected,	
9/20/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
35	SOUTH END AVE & THAMES	15.75	15.75 data deleted from NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
35	SOUTH END AVE. & THAMES		
9/21/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
8	WEST ST & WARREN ST.	78.74	
17A ?	NORTH END AVE & RIVER	55.12	55.12 data as well as sampling location deleted in NYC
21	FULTON & CHURCH ST.	not detected,	
27	GATEWAY PLAZA PARK AREA	overload	
36	THIRD PLACE & BATTERY PL - WATERSIDE	78.74	131.23 data deleted in NYC web version
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
8	WEST ST & WARREN ST.	78.74	
27	GATEWAY PLAZA PARK AREA	Overload	
36	THIRD PL & BATTERY PL -		
9/22/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
7	WARREN ST & NORTH END AVENUE	not detected, <8.75	
12	MURRAY & CHURCH ST.	not detected, <7.87	
27	GATEWAY PLAZA PARK AREA	6.67	6.75 data altered to "below detection limit" in NYC web
32	WEST ST & ALBANY	23.62	
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
7	WARREN ST & NORTH END	NA	
12	MURRAY & CHURCH ST.	not detected,	
27	GATEWAY PLAZA PARK AREA	not detected,	
31	SOUTH END AVE & ALBANY	NA	
32	WEST ST & ALBANY	24	
9/23/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
15	PARK PL. & GREENWICH	7.27	7.27 altered to "below detection limit" in NYC web
16	PARK PL. & CHURCH	not detected,	
21	FULTON & CHURCH ST.	overload	
29	TRINITY PL. & THAMES ST.	overload	
33A	RECTOR PLACE BY THE PARK	61.24	61.24 data altered to "below detection limit" in NYC web
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
15	PARK PL. & GREENWICH	not detected,	
16	PARK PL. & CHURCH	not detected,	
21	FULTON & CHURCH ST.	Overload	
29	TRINITY PL. & THAMES ST.	Overload	
33A	RECTOR PL BY THE PARK	not detected, <10	

9/24/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
10	NORTH END AVE & PARK PL	8.75	8.75 data altered to "below the detection limit" in NYC
12	MURRAY & CHURCH ST.	35.00	
15	PARK PL. & GREENWICH	not detected,	
31	SOUTH END AVE & ALBANY	not detected,	
32	WEST ST & ALBANY	78.74	
33A	RECTOR PLACE BY THE PARK	131.23	131.23 data altered to "below the detection limit" in NYC
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
10	NORTH END AVE & PARK PL	not detected,	
12	MURRAY & CHURCH ST.	35	
15	PARK PL. & GREENWICH	not detected,	
31	SOUTH END AVE & ALBANY	not detected,	
32	WEST ST & ALBANY	79	
33A	RECTOR PL BY THE PARK	not detected,	
9/25/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
8	WEST ST & WARREN ST.	8.00	8.00 data altered to "below the detection limit" in NYC
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
8	WEST ST & WARREN ST.	not detected,	
9/26/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
4	RIVER TERRACE &	not detected,	
12	MURRAY & CHURCH ST.	not detected,	
15	PARK PL. & GREENWICH	not detected,	
19	VESEY & WEST ST.	16.00	
21	FULTON & CHURCH ST.	not detected,	
27	GATEWAY PLAZA PARK AREA	13.33	
32	WEST ST & ALBANY	20.00	
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
4	RIVER TERRACE &	not detected,	
12	MURRAY & CHURCH ST.	not detected,	
15	PARK PL. & GREENWICH	not detected,	
19	VESEY & WEST ST.	16	
21	FULTON & CHURCH ST.	not detected,	
27	GATEWAY PLAZA PARK AREA	13.33	
32	WEST ST & ALBANY	20	
9/27/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
19	VESEY & WEST ST. [sample A]	60.00	60.00 data altered to "no analysis" for this first sample at Vesey and West in NYC web version. There was a repeat sample which the web version admitted to
19	VESEY & WEST ST. [sample B]	60.00	
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
19	VESEY & WEST ST.	NA	
19	VESEY & WEST ST.	60	
9/28/01			
There were no reported asbestos analyses by TEM (electron microscopy) for this day in the 11/13/01 FOIL response.			
9/29/01			
NYS DEC 11/13/01 FOIL RESPONSE VERSION OF NYC DATA			
12	MURRAY & CHURCH ST.	40.00	
16	PARK PL. & CHURCH	16.00	16.00 data altered to "below detection limit" in NYC web
21	FULTON & CHURCH ST.	not detected,	

29	TRINITY PL. & THAMES ST.	NA	The NYC web version calls this sample "overload." By this date, the NYC web version started to have more sampling results at more sampling locations. It is probable that the 11/13/01 FOIL response from the NYS
31	SOUTH END AVE & ALBANY	6.67	6.67 data altered to "below detection limit" in NYC web
34	W. THAMES ST - ALONG	not detected,	
37	WEST OF THIRD PL (SOUTH	not detected,	
NYC WEB VERSION OF ITS OWN DATA (not posted on its web until after 2/2/02)			
12	MURRAY & CHURCH ST.	40	
16	PARK PL. & CHURCH	not detected,	
21	FULTON & CHURCH ST.	not detected,	
27	GATEWAY PLAZA PARK AREA	not detected,	
29	TRINITY PL. & THAMES ST.	Overload	
31	SOUTH END AVE & ALBANY	not detected,	
32	WEST ST & ALBANY	80	
34	W. THAMES ST - ALONG	not detected,	
37	WEST OF THIRD PL (SOUTH	not detected,	

The first version of the NYC DEP data was provided by the NY State Department of Environmental Conservation (NYS DEC) in their 11/13/01 response to a Freedom of Information Law (FOIL) request. Several sets of air and dust tests were included in addition to the NYC DEP data, including OSHA data, Con Edison, etc. A scanned version of the hard copy was posted on the www.NYenviroLAW.org web site sometime between 1/22/02 and 6/4/02.

By at least 10/24/01, the NYC DEP posted limited asbestos air testing results on its website. However, the only test results posted were those using the light microscope method (PCM). The DEP did not post ANY of its electron microscope (TEM) results, which are the only ones related to EPA's stated health benchmark of the time, 70 f/mm². It was not until sometime between 2/2/02 to 11/30/02 (the archived web site dates) that the NYC DEP posted any of its TEM data. It is this TEM data, with its alterations, deletions, and changes, which is included in this table.

11/30/01
 posted
 TEM data

WORLD TRADE CENTER AIR MONITORING TABLE

Date Sampled	Sample ID	Location Sampled	Ambient/ Indoor	Duration Sampled (Mins)	Sample Volume (liters)	PCM LOQ (f/cc)	Fiber Conc. PCM (f/cc)	Asbestos Conc. TEM (struc./mm2)
PERIMETER SAMPLES								
9/12/01	10912/A207001	GREENWICH & CHAMBERS ST.	AMBIENT	95	950		0.080	overload
9/12/01	10912/A207002	CENTRE & CHAMBERS ST.	AMBIENT	90	900		0.016	123.73
9/12/01	10912/A207003	SPRUCE & GOLD ST	AMBIENT	95	950		0.040	157.48
9/12/01	10912/A207004	BROADWAY & WORTH ST	AMBIENT	50	500		0.010	44.99
9/12/01	10912/A207005	W.BROADWAY & WORTH ST	AMBIENT	35	350		0.010	11.25
PERIMETER SAMPLES								
9/13/01	10913/A207001	MURRAY & CHURCH ST	AMBIENT	25	375		0.220	overload
9/13/01	10913/A207002	FULTON & CHURCH ST.	AMBIENT	40	600		0.100	overload
9/13/01	10913/A207003	MURRAY & GREENWICH ST	AMBIENT	40	600	0.01	<LOQ	
9/13/01	10913/A207005	LIBERTY & CHURCH ST.	AMBIENT	30	450	0.01	<LOQ	
9/13/01	10913/A207004	WASHINGTON & CEDAR ST.	AMBIENT	30	450	0.01	<LOQ	
PERIMETER SAMPLES								
9/14/01	10914/A003001	MURRAY & CHURCH ST	AMBIENT	40	600	0.01	<LOQ	
9/14/01	10914/A003002	FULTON & CHURCH ST.	AMBIENT	40	600		0.007	
9/14/01	10914/A003007	MURRAY & GREENWICH ST.	AMBIENT	50	750	0.01	<LOQ	
9/14/01	10914/A003003	LIBERTY & CHURCH ST	AMBIENT	40	600		0.020	14.32
9/14/01	10914/A003004	CEDAR & TRINTY PL	AMBIENT	39	585		0.027	overload
9/14/01	10914/A003008	MURRAY BETWEEN CHURCH & BROADWAY	AMBIENT	40	600		0.002	
9/14/01	10914/A003009	FULTON BETWEEN CHURCH & BROADWAY	AMBIENT	30	450	0.01	<LOQ	
HOT ZONE SAMPLES								
9/14/01	10914/A003005	1 LIBERTY PLAZA - APPROX. 50 FT FROM EXPLOSION	AMBIENT	50	750	0.01	<LOQ	
9/14/01	10914/A003006	PARK & GREENWICH ST.- APPROX. 50 FT. FROM EXPLOSION	AMBIENT	35	525		0.009	<6.56
DEP FACILITY								
9/14/01	10914/A207006	184 AVE D, DEP PUMPING STATION - FOUR BAY AREA	INDOOR	65	975		0.005	
PERIMETER SAMPLES								
9/15/01	10915/A307001	MURRAY & CHURCH ST.	AMBIENT	35	525		0.022	120.18
9/15/01	302-1	FULTON & CHURCH ST.	AMBIENT	40	600		0.034	overload
9/15/01	LAB3#2	MURRAY & GREENWICH ST	AMBIENT	45	675		0.031	overload
9/15/01	LAB1#2	LIBERTY & BROADWAY	AMBIENT	50	750		0.008	overload
9/15/01	LAB3#3	CEDAR & BROADWAY	AMBIENT	30	450		0.033	overload
9/15/01	10915/A307003	BROADWAY & MURRAY ST	AMBIENT	30	450		0.045	overload
9/15/01	10915/A307002	MURRAY BETWEEN CHURCH & BROADWAY	AMBIENT	50	750		0.024	overload
9/15/01	LAB1#1	FULTON BETWEEN CHURCH & BROADWAY	AMBIENT	45	675		0.035	131.23
HOT ZONE SAMPLES								
9/15/01	LAB3#1	GREENWICH & PARK PL	AMBIENT	30	450		0.076	overload
9/15/01	302-2	VESEY BETWEEN CHURCH & GREENWICH ST	AMBIENT	40	450		0.035	overload
PERIMETER SAMPLES								
9/16/01	10916/A207003	MURRAY & CHURCH ST.	AMBIENT	30	450		0.030	78.74
9/16/01	302/002	FULTON & CHURCH ST.	AMBIENT	40	600		0.030	overload
9/16/01	LAB1#1	MURRAY & GREENWICH ST	AMBIENT	45	675		0.013	78.74
9/16/01	10916/A307001	LIBERTY ST. & BROADWAY	AMBIENT	35	525		0.010	overload
9/16/01	10916/A307002	CEDAR ST. & BROADWAY	AMBIENT	40	600		0.030	overload
9/16/01	10916/A207004	MURRAY BETWEEN CHURCH & BROADWAY	AMBIENT	45	675		0.050	overload
9/16/01	302/003	FULTON BETWEEN CHURCH & BROADWAY	AMBIENT	40	600		0.030	121.69
HOT ZONE SAMPLES								
9/16/01	LAB1#2	WASHINGTON & PARK PL	AMBIENT	30	450		0.038	102.36
9/16/01	302/001	VESEY ST BETWEEN CHURCH & W.BROADWAY	AMBIENT	40	600		0.024	overload
INDOOR SAMPLES								
9/16/01	10916/A207001	CITY HALL, 2ND FL, OUTSIDE JULIE MENDIK'S OFFICE	INDOOR	120	1800		0.022	overload
9/16/01	10916/A207002	CITY HALL, 1ST FL - BLUE ROOM	INDOOR	120	1800		0.011	39.37
PERIMETER SAMPLES								
9/17/01	LAB1#1	MURRAY & CHURCH ST	AMBIENT	45	675		0.013	43.74
9/17/01	302/001	FULTON & CHURCH ST.	AMBIENT	45	675		0.017	overload
9/17/01	LAB3#001	MURRAY & GREENWICH ST	AMBIENT	45	675		0.012	61.24
9/17/01	10917/A307001	LIBERTY ST. & BROADWAY	AMBIENT	30	450		0.062	overload
HPD BUILDING								
9/17/01	LAB3#1	100 GOLD STREET - LOBBY	AMBIENT	60	900		0.006	22.50
9/17/01	LAB3#2	100 GOLD STREET - 9th FL	AMBIENT	60	900		0.004	<11.25
BATTERY PARK CITY								
9/17/01	10917/A100001	22 RIVER TERRACE, LOBBY	INDOOR	120	1800		0.004	
9/17/01	10917/A100002	22 RIVER TERRACE, 14th FL.	INDOOR	120	1800	0	<LOQ	
9/17/01	10917/A307003	41 RIVER TERRACE (TRIBECA POINT) - LOBBY	INDOOR	90	1350	0	<LOQ	
9/17/01	10917/A307004	41 RIVER TERRACE (TRIBECA POINT) - PHB	INDOOR	90	1350		0.003	
9/17/01	10917/A307002	400 CHAMBERS STREET (TRIBECA POINT) - LOBBY	INDOOR	120	1800		0.014	19.69
9/17/01	302/002	400 CHAMBERS STREET, 9TH FLOOR	INDOOR	120	1800		0.007	<19.69
9/17/01	302/003	WEST END OF WARREN STREET	AMBIENT	45	675		0.007	

WORLD TRADE CENTER AIR MONITORING TABLE

Date Sampled	Sample ID	Location Sampled	Ambient/ Indoor	Duration Sampled (Mins)	Sample Volume (liters)	PCM LOQ (f/cc)	Fiber Conc. PCM (f/cc)	Asbestos Conc. TEM (struc./mm2)
PERIMETER SAMPLES								
9/18/01	10918/A003001	MURRAY & CHURCH ST	AMBIENT	35	525		0.018	110.24
9/18/01	302/001	FULTON & CHURCH ST.	AMBIENT	40	600		0.027	overload
9/18/01	LAB3#1	MURRAY & GREENWICH ST.	AMBIENT	30	450		0.011	<7.87
9/18/01	10918/A207002	LIBERTY & CHURCH ST.	AMBIENT	30	450		0.021	overload
9/18/01	10918/A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675		0.008	52.49
9/18/01	10918/A207001	WEST ST & VESEY ST.	AMBIENT	40	600		0.034	157.48
INDOOR SAMPLES								
9/18/01	10918/A307002	225 RECTOR PL - 11TH FLOOR	INDOOR	90	1350		0.044	overload
9/18/01	302/002	225 RECTOR PL - LOBBY	INDOOR	90	1350		0.030	nsuff. Material
PERIMETER SAMPLES								
9/19/01	10919/A003001	MURRAY & CHURCH ST.	AMBIENT	45	675		0.014	122.48
9/19/01	302/001	FULTON & CHURCH ST.	AMBIENT	45	675		0.020	overload
9/19/01	10919/A100001	MURRAY & GREENWICH ST.	AMBIENT	40	600	0.01	<LOQ	
9/19/01	10919/A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675	0.01	<LOQ	
BATTERY PARK CITY								
NORTH END								
9/19/01	302/003	RIVER TERRACE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/19/01	302/002	RIVER TERRACE & CHAMBERS ST	AMBIENT	45	675		0.012	6.75
9/19/01	LAB 3 #5	NORTH END AVE & VESEY ST.	AMBIENT	30	450		0.010	overload
9/19/01	LAB 3 #2	WEST ST & WARREN ST.	AMBIENT	30	450		0.030	149.61
9/19/01	10919/A307002	NORTH END AVE & PARK PL WEST	AMBIENT	45	675		0.050	<8.75
9/19/01	10919/A307003	RIVER TERRACE & VESEY ST	AMBIENT	45	675		0.012	17.50
SOUTH END								
9/19/01	10919/A307004	SOUTH END AVE & ALBANY ST	AMBIENT	45	675		0.013	overload
9/19/01	10919/A307005	RECTOR PL BY THE PARK	AMBIENT	45	675	0.01	<LOQ	
9/19/01	302/004	W. THAMES ST - ALONG WATERFRONT	AMBIENT	45	675	0.01	<LOQ	
9/19/01	302/005	THIRD PL & BATTERY PL - WATERSIDE	AMBIENT	45	675	0.01	<LOQ	
9/19/01	LAB 3 #3	WEST ST & ALBANY	AMBIENT	30	450		0.050	overload
9/19/01	LAB 3 #4	GATEWAY PLAZA PARK AVE	AMBIENT	30	450		0.010	31.50
PERIMETER SAMPLES								
9/20/01	10920/A003001	MURRAY & CHURCH ST.	AMBIENT	45	675	0.01	<LOQ	
9/20/01	302/001	FULTON & CHURCH ST.	AMBIENT	45	675	0.01	<LOQ	
9/20/01	LAB3 #1	MURRAY & GREENWICH ST.	AMBIENT	30	450	0.01	<LOQ	
9/20/01	10920/A307001	WARREN ST. & NORTH END AVE	AMBIENT	45	675	0.01	<LOQ	
9/20/01	302/002	CEDAR & CHURCH STREETS	AMBIENT	45	675	0.01	<LOQ	
BATTERY PARK CITY								
NORTH END								
09/20/01	302/005	RIVER TERRACE AND PARK PLACE	AMBIENT	30	450	0.01	<LOQ	
9/20/01	302/006	RIVER TERRACE AND CHAMBERS ST	AMBIENT	30	450	0.01	<LOQ	
9/20/01	LAB3 #4	WARREN ST. & NORTH END AVE	AMBIENT	30	450	0.01	<LOQ	
9/20/01	LAB3 #5	NORTH END AVE & RIVER TERRACE	AMBIENT	30	450	0.01	<LOQ	
9/20/01	10920/A307002	NORTH END AVENUE & PARK PL	AMBIENT	45	675	0.01	<LOQ	
9/20/01	10920/A307003	RIVER TERRACE AT THE PARK	AMBIENT	45	675	0.01	<LOQ	
SOUTH END								
9/20/01	10920/A307004	SOUTH END AVENUE AND ALBANY ST.	AMBIENT	45	675	0.01	<LOQ	
9/20/01	10920/A307005	RECTOR PLACE - AT THE PARK	AMBIENT	45	675	0.01	<LOQ	
9/20/01	302/003	WEST THAMES STREET	AMBIENT	35	525	0.01	<LOQ	
9/20/01	302/004	THIRD PLACE & BATTERY PL.	AMBIENT	30	450	0.01	<LOQ	
9/20/01	LAB3 #2	SOUTH END AVE. & THAMES ST.	AMBIENT	30	450	0.01	0.010	15.75
9/20/01	LAB3 #3	GATEWAY PLAZA PARK AVENUE	AMBIENT	35	525	0.01	<LOQ	
PERIMETER SAMPLES								
9/21/01	10921A040001	MURRAY & CHURCH ST.	AMBIENT	45	675	0.01	<LOQ	
9/21/01	302/001.	FULTON & CHURCH ST.	AMBIENT	45	675		0.008	<7.87
9/21/01	LAB3#1	MURRAY & GREENWICH ST.	AMBIENT	35	525	0.01	<LOQ	
9/21/01	10921A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675	0.01	<LOQ	
BATTERY PARK CITY								
NORTH END								
9/21/01	302/004	RIVER TERRACE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/21/01	302/005	RIVER TERRACE & CHAMBERS ST	AMBIENT	45	675	0.01	<LOQ	
9/21/01	LAB3 #5	NORTH END AVE & RIVER TERRACE	AMBIENT	30	450		0.020	55.12
9/21/01	LAB3#2	WEST ST & WARREN ST.	AMBIENT	35	525		0.010	78.74
9/21/01	10921A307002	NORTH END AVE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/21/01	10921A307003	RIVER TERRACE & VESEY ST	AMBIENT	45	675	0.01	<LOQ	
SOUTH END								
9/21/01	10921A307004	SOUTH END AVE & ALBANY ST	AMBIENT	45	675	0.01	<LOQ	
9/21/01	10921A307005	RECTOR PL BY THE PARK	AMBIENT	45	675	0.01	<LOQ	
9/21/01	302/003	W. THAMES ST - ALONG WATERFRONT	AMBIENT	40	600	0.01	<LOQ	
9/21/01	302/002	THIRD PL & BATTERY PL - WATERSIDE	AMBIENT	45	675		0.009	78.74
9/21/01	LAB 3 #4	WEST ST & ALBANY	AMBIENT	30	450		<0.011	
9/21/01	LAB 3 #3	GATEWAY PLAZA PARK AVE	AMBIENT	34	510		0.014	overload

WORLD TRADE CENTER AIR MONITORING TABLE

WORLD TRADE CENTER AIR MONITORING TABLE						Fiber	Asbestos	
Date	Sample ID	Location Sampled	Ambient/ Indoor	Duration Sampled (Mins)	Sample Volume (liters)	PCM LOQ (f/cc)	Conc. PCM (f/cc)	Conc. TEM (struc./mm2)
PERIMETER SAMPLES								
9/22/01	10922A040001	MURRAY & CHURCH ST.	AMBIENT	40	600		0.010	<7.87
9/22/01	302/001.	FULTON & CHURCH ST.	AMBIENT	45	675		0.008	
9/22/01	LAB3#1	MURRAY & GREENWICH ST.	AMBIENT	30	450		<0.01	
9/22/01	10922A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675		0.009	<8.75
NORTH END								
9/22/01	302/004	RIVER TERRACE & PARK PL WEST	AMBIENT	45	675	<0.007	<LOQ	
9/22/01	302/005	RIVER TERRACE & CHAMBERS ST	AMBIENT	40	600		0.009	
9/22/01	LAB3 #5	NORTH END AVE & RIVER TERRACE	AMBIENT	30	450	0.01	<0.01	
9/22/01	LAB3#2	WEST ST & WARREN ST.	AMBIENT	30	450	0.01	<0.01	
9/22/01	10922/A307002	NORTH END AVE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/22/01	10922/A307003	RIVER TERRACE & VESEY ST	AMBIENT	45	675	0.01	<LOQ	
SOUTH END								
9/22/01	10922/A307004	SOUTH END AVE & ALBANY ST	AMBIENT	45	675	0.01	<LOQ	
9/22/01	10922/A307005	RECTOR PL BY THE PARK	AMBIENT	45	675	0.01	<LOQ	
9/22/01	302/003	W. THAMES ST - ALONG WATERFRONT	AMBIENT	40	600	0.01	<0.008	
9/22/01	302/002	THIRD PL & BATTERY PL - WATERSIDE	AMBIENT	45	675	0.01	<LOQ	
9/22/01	LAB 3 #4	WEST ST & ALBANY	AMBIENT	40	600		0.010	
9/22/01	LAB 3 #3	GATEWAY PLAZA PARK AVE	AMBIENT	35	525		0.010	
ST. JOHN'S UNIVERSITY								
9/22/01	10922A003001	101 MURRAY (LOBBY AREA - CAFETERIA)	INDOOR	120	1800		0.003	<0.003
9/22/01	10922A003002	101 MURRAY(2ND FLOOR BY ROOM 214)	INDOOR	120	1800	0	<0.003	
9/22/01	LAB3#6	101 MURRAY (6TH FLOOR)	INDOOR	120	1800	0	<0.003	
9/22/01	LAB3#7	101 MURRAY (10TH FLOOR)	INDOOR	120	1800	0	<0.003	
PERIMETER SAMPLES								
9/23/01	10923A040001	MURRAY & CHURCH ST.	AMBIENT	45	675	0.01	<LOQ	overload
9/23/01	302/001	FULTON & CHURCH ST.	AMBIENT	40	600		0.026	
9/23/01	LAB3#1	MURRAY & GREENWICH ST.	AMBIENT	30	450	0.01	<LOQ	
9/23/01	10923/A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675	0.01	<LOQ	overload
9/23/01	10923A040002	PARK PL. & CHURCH	AMBIENT	45	675		0.010	
9/23/01	302/006	PARK PL. & GREENWICH	AMBIENT	40	600		0.014	
9/23/01	10923A307004	TRINITY PL. & THAMES ST.	AMBIENT	45	675		0.013	
BATTERY PARK SAMPLES								
NORTH END								
9/23/01	302/004	RIVER TERRACE & PARK PL WEST	AMBIENT	40	600	0.01	<LOQ	61.24
9/23/01	302/005	RIVER TERRACE & CHAMBERS ST	AMBIENT	40	600	0.01	<LOQ	
9/23/01	LAB3 #3	RIVER TERRACE PARK AREA	AMBIENT	35	525	0.01	<LOQ	
9/23/01	LAB3#2	WEST ST & WARREN ST.	AMBIENT	30	450	0.01	<LOQ	
9/23/01	10923/A307002	NORTH END AVE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/23/01	10923/A307003	RIVER TERRACE & VESEY ST	AMBIENT	45	675	0.01	<LOQ	
SOUTH END								
9/23/01	10923/A307006	SOUTH END AVE & ALBANY ST	AMBIENT	45	675	0.01	<LOQ	61.24
9/23/01	10923/A307005	RECTOR PL BY THE PARK	AMBIENT	45	675		0.029	
9/23/01	302/002	W. THAMES ST - ALONG WATERFRONT	AMBIENT	40	600	0.01	<LOQ	
9/23/01	302/003	WEST OF THIRD PL (SOUTH COVE APARTMENT)	AMBIENT	40	600	0.01	<LOQ	
9/23/01	LAB 3 #4	WEST ST & ALBANY	AMBIENT	30	450	0.01	<LOQ	
9/23/01	LAB 3 #5	GATEWAY PLAZA PARK AVE	AMBIENT	30	450	0	<LOQ	
PERIMETER SAMPLES								
9/24/01	10924A207001	MURRAY & CHURCH ST.	AMBIENT	45	675		0.017	35.00
9/24/01	10924A040001	MURRAY & GREENWICH ST	AMBIENT	45	675		0.009	
9/24/01	10924A307001	PARK PL. & CHURCH	AMBIENT	45	675		0.007	
9/24/01	302/001	PARK PL. & GREENWICH	AMBIENT	40	600		0.012	<8.75
BATTERY PARK SAMPLES								
NORTH END								
9/24/01	302/002	RIVER TERRACE & PARK PL WEST	AMBIENT	40	600	0.01	<LOQ	8.75
9/24/01	302/003	RIVER TERRACE & CHAMBERS ST	AMBIENT	40	600	0.01	<LOQ	
9/24/01	10924A040003	RIVER TERRACE PARK & WARREN ST	AMBIENT	45	675		0.007	
9/24/01	10924A040002	WEST ST & WARREN ST.	AMBIENT	45	675		0.009	
9/24/01	10924/A307005	NORTH END AVE & PARK PL WEST	AMBIENT	45	675		0.012	
9/24/01	10924/A307004	RIVER TERRACE & VESEY ST	AMBIENT	45	675	0.007	<LOQ	
SOUTH END								
9/24/01	10924/A307002	SOUTH END AVE & ALBANY ST	AMBIENT	45	675		0.010	<8.75
9/24/01	10924A307003	RECTOR PL BY THE PARK	AMBIENT	45	675		0.039	131.23
9/24/01	302/004	W. THAMES ST - ALONG WATERFRONT	AMBIENT	40	600	0.01	<LOQ	78.74
9/24/01	302/005	WEST OF THIRD PL (SOUTH COVE APARTMENT)	AMBIENT	40	600	0.01	<LOQ	
9/24/01	10924/A040004	WEST ST & ALBANY	AMBIENT	45	675		0.010	
9/24/01	10924A040005	GATEWAY PLAZA PARK AVE	AMBIENT	30	450	0.011	<0.011	

WORLD TRADE CENTER AIR MONITORING TABLE

Date Sampled	Sample ID	Location Sampled	Ambient/ Indoor	Duration Sampled (Mins)	Sample Volume (liters)	PCM LOQ (f/cc)	Fiber Conc. PCM (f/cc)	Asbestos Conc. TEM (struc./mm2)
PERIMETER SAMPLES								
9/25/01	10925A307002	MURRAY & CHURCH ST.	AMBIENT	45	675	0.01	<LOQ	
9/25/01	302/001	FULTON & CHURCH ST.	AMBIENT	40	600	0.01	<LOQ	
9/25/01	302/003	MURRAY & GREENWICH ST.	AMBIENT	45	675	0.01	<LOQ	
9/25/01	10925A307003	WARREN ST & NORTH END AVENUE	AMBIENT	40	600	0.01	<LOQ	
9/25/01	10925A307002	PARK PL. & CHURCH	AMBIENT	45	675		0.009	
9/25/01	302/002	PARK PL. & GREENWICH	AMBIENT	40	600		0.009	
9/25/01	10925A003001	TRINITY PL. & THAMES ST.	AMBIENT	40	600	0.01	<LOQ	
BATTERY PARK SAMPLES								
NORTH END								
9/25/01	302/004	RIVER TERRACE & PARK PL WEST	AMBIENT	40	600	0.01	<LOQ	
9/25/01	302/005	RIVER TERRACE & CHAMBERS ST	AMBIENT	45	675	0.01	<LOQ	
9/25/01	302/006	RIVER TERRACE PARK AREA	AMBIENT	45	675	0.01	<LOQ	
9/25/01	10925A307005	WEST ST & WARREN ST.	AMBIENT	45	675		0.012	
9/25/01	10925A307004	NORTH END AVE & PARK PL WEST	AMBIENT	45	675	0.01	<LOQ	
9/25/01	10925A307006	RIVER TERRACE & VESEY ST	AMBIENT	40	600	0.01	<LOQ	
SOUTH END								
9/25/01	302/009	SOUTH END AVE & ALBANY ST	AMBIENT	45	675	0.01	<LOQ	
9/25/01	302/010	RECTOR PL BY THE PARK	AMBIENT	45	675	0.01	<LOQ	
9/25/01	302/007	W. THAMES ST - ALONG WATERFRONT	AMBIENT	45	675	0.01	<LOQ	
9/25/01	302/008	WEST OF THIRD PL (SOUTH COVE APARTMENT)	AMBIENT	45	675	0.01	<LOQ	
9/25/01	10925A003002	WEST ST & ALBANY	AMBIENT	40	600	0.01	<LOQ	
9/25/01	10925A003003	GATEWAY PLAZA PARK AVE	AMBIENT	40	600		0.008	
PERIMETER SAMPLES								
9/26/01	302/004	MURRAY & CHURCH ST.	AMBIENT	45	675		0.010	
9/26/01	302/005	FULTON & CHURCH ST.	AMBIENT	35	525		0.078	
9/26/01	302/003	MURRAY & GREENWICH ST.	AMBIENT	45	675		0.008	
9/26/01	10926A307001	WARREN ST & NORTH END AVENUE	AMBIENT	45	675	0.01	<LOQ	
9/26/01	302/002	PARK PL. & CHURCH	AMBIENT	45	675		0.008	
9/26/01	302/001	PARK PL. & GREENWICH	AMBIENT	45	675		0.008	
9/26/01	10926A307004	TRINITY PL. & THAMES ST.	AMBIENT	35	525	0.01	<LOQ	
9/26/01	10926A307009	VESEY & WEST ST.	AMBIENT	45	675		0.011	
BATTERY PARK SAMPLES								
NORTH END								
9/26/01	302/008	RIVER TERRACE & PARK PL WEST	AMBIENT	35	525	0.01	<LOQ	
9/26/01	302/009	RIVER TERRACE & CHAMBERS ST	AMBIENT	35	525		0.017	
9/26/01	302/010	RIVER TERRACE PARK AREA	AMBIENT	35	525	0.01	<LOQ	
9/26/01	302/011	WEST ST & WARREN ST.	AMBIENT	35	525	0.01	<LOQ	
9/26/01	10926A307002	NORTH END AVE & PARK PL WEST	AMBIENT	40	600	0.01	<LOQ	
9/26/01	10926A307003	RIVER TERRACE & VESEY ST	AMBIENT	35	525	0.01	<LOQ	
SOUTH END								
9/26/01	10926A307006	SOUTH END AVE & ALBANY ST	AMBIENT	35	525	0.01	<LOQ	
9/26/01	10926A307008	RECTOR PL BY THE PARK	AMBIENT	35	525	0.01	<LOQ	
9/26/01	302/006	W. THAMES ST - ALONG WATERFRONT	AMBIENT	35	525	0.01	<LOQ	
9/26/01	302/007	WEST OF THIRD PL (SOUTH COVE APARTMENT)	AMBIENT	35	525	0.01	<LOQ	
9/26/01	10926A307007	WEST ST & ALBANY	AMBIENT	35	525		0.014	
9/26/01	10926A307005	GATEWAY PLAZA PARK AVE	AMBIENT	35	525		0.023	
PERIMETER SAMPLES								
9/27/01	302/001	PARK PL. & CHURCH	AMBIENT	35	525		0.050	
9/27/01	302/002	MURRAY & CHURCH ST.	AMBIENT	40	600		0.016	
9/27/01	302/003	PARK PL. & GREENWICH	AMBIENT	35	525		0.014	
9/27/01	302/004	MURRAY & GREENWICH ST	AMBIENT	40	600	0.01	<LOQ	
9/27/01	302/005	FULTON & CHURCH ST.	AMBIENT	35	525		0.010	
9/27/01	302/006	TRINITY PL. & THAMES ST.	AMBIENT	35	525	0.01	<LOQ	
9/27/01	302/007	WARREN ST & NORTH END AVENUE	AMBIENT	35	525	0.01	<LOQ	
9/27/01	10927A207002	VESEY & WEST ST.	AMBIENT	35	525		0.018	
9/27/01	10927A207003	VESEY & WEST ST.	AMBIENT	35	525		0.016	
BATTERY PARK SAMPLES								
NORTH END								
9/27/01	302/008	RIVER TERRACE & PARK PL WEST	AMBIENT	35	525	0.01	<LOQ	
9/27/01	302/009	RIVER TERRACE & CHAMBERS ST	AMBIENT	35	525		0.014	
9/27/01	302/010	RIVER TERRACE PARK AREA	AMBIENT	35	525	0.01	<LOQ	
9/27/01	302/011	WEST ST & WARREN ST.	AMBIENT	35	525		0.009	
9/27/01	302/012	NORTH END AVE & PARK PL WEST	AMBIENT	35	525	0.01	<LOQ	
9/27/01	302/013	RIVER TERRACE & VESEY ST	AMBIENT	35	525	0.01	<LOQ	
SOUTH END								
9/27/01	LAB3-001	SOUTH END AVE & ALBANY ST	AMBIENT	40	600	0.01	<LOQ	
9/27/01	LAB3-002	RECTOR PL BY THE PARK	AMBIENT	35	525	0.01	<LOQ	
9/27/01	LAB3-003	W. THAMES ST - ALONG WATERFRONT	AMBIENT	40	600	0.01	<LOQ	
9/27/01	LAB3-004	WEST OF THIRD PL (SOUTH COVE APARTMENT)	AMBIENT	45	675	0.01	<LOQ	
9/27/01	LAB3-005	WEST ST & ALBANY	AMBIENT	45	675	0.01	<LOQ	
9/27/01	LAB3-006	GATEWAY PLAZA PARK AVE	AMBIENT	35	525	0.01	<LOQ	

Renata Consulting Services, Inc.

304 Edgemont Terrace Teaneck NJ 07666 201 692 7967 fax 201 678 1789

Certificate of Analysis

Client: Riverpoint, Inc
Client #: 101171

Project Location: WTC, NYC
Work Area: N/A

Analysis Date: April 3, 2002
RCS Project # 283

PCM Air Sample Analysis Summary

Lab ID	Client ID	Sample Description	Date Collected	Flow Rate [liters/min.]	Duration [minutes]	Volume [liters]	Fibers	Fields	Density [Fiber/mm ²]	Fiber Conc. [Fiber/cc]	LOD [Fiber/cc]
16 6348	010403	Park Place and Church	4/3/02	14.05	45	632.3	8.00	100	10.18	0.006	0.004
15 6349	020403	Park Place and Greenwich	4/3/02	14.30	45	643.5	6.00	100	7.64	0.005	0.004
12 6350	030403	Murray and Church	4/3/02	14.05	45	632.3	9.00	100	11.46	0.007	0.004
11 6351	040403	Murray and Greenwich	4/3/02	14.30	45	643.5	7.50	100	9.55	0.006	0.004
21 6352	050403	Fulton and Church	4/3/02	14.05	45	632.3	5.00	100	6.37	<LOD	0.004
7 6335	060403	Warren and North End	4/3/02	14.45	45	650.3	6.00	100	7.64	0.005	0.004
8 6336	070403	West Street and Warren	4/3/02	14.45	45	650.3	10.00	100	12.74	0.008	0.004
27 6342	080403	Gateway Plaza	4/3/02	15.00	45	675.0	7.00	100	8.92	0.005	0.004
31 6343	090403	South End Avenue and Albany	4/3/02	15.00	45	675.0	2.00	100	2.55	<LOD	0.004
32 6344	100403	West and Albany	4/3/02	15.00	45	675.0	2.00	100	2.55	<LOD	0.004
33a 6345	110403	Rector Place by park	4/3/02	15.00	45	675.0	1.00	100	1.27	<LOD	0.004
37 6346	120403	3rd Place and South End and Waterside	4/3/02	15.00	45	675.0	2.00	100	2.55	<LOD	0.004
39 6347	130403	West end of West Thames	4/3/02	14.70	45	661.5	3.50	100	4.46	<LOD	0.004
9 6337	140403	Park Place and River Terrace	4/3/02	14.70	45	661.5	1.00	100	1.27	<LOD	0.004
4 6338	150403	River Terrace and Chambers	4/3/02	14.70	45	661.5	5.00	100	6.37	<LOD	0.004
6A 6339	160403	River Terrace and Warren	4/3/02	14.70	45	661.5	5.50	100	7.01	<LOD	0.004
10 6340	170403	North End and Park Place	4/3/02	14.70	45	661.5	2.00	100	2.55	<LOD	0.004
17 6341	180403	Vesey and River Terrace	4/3/02	14.45	45	650.3	4.00	100	5.10	<LOD	0.004
29 6353	190403	Trinity Place and Thames	4/3/02	14.30	45	643.5	7.00	100	8.92	0.005	0.004
20A 6354	200403	Vesey and West Broadway	4/3/02	14.30	45	643.5	3.00	100	3.82	<LOD	0.004
6355	FB1	Field Blank	4/3/02	0.00	0	0.0	0.00	100	0.00	N/A	N/A
6356	FB2	Field Blank	4/3/02	0.00	0	0.0	0.00	100	0.00	N/A	N/A

ELAP ID No. 11750 Expires 12:01 AM, June 15, 2002

Analysis Method: Phase Contrast Microscopy, NIOSH Method 7400

Limit of Quantitation (LOQ) = 102 [Fiber/mm²]

Limit of Detection (LOD) = 7 [Fiber/mm²]

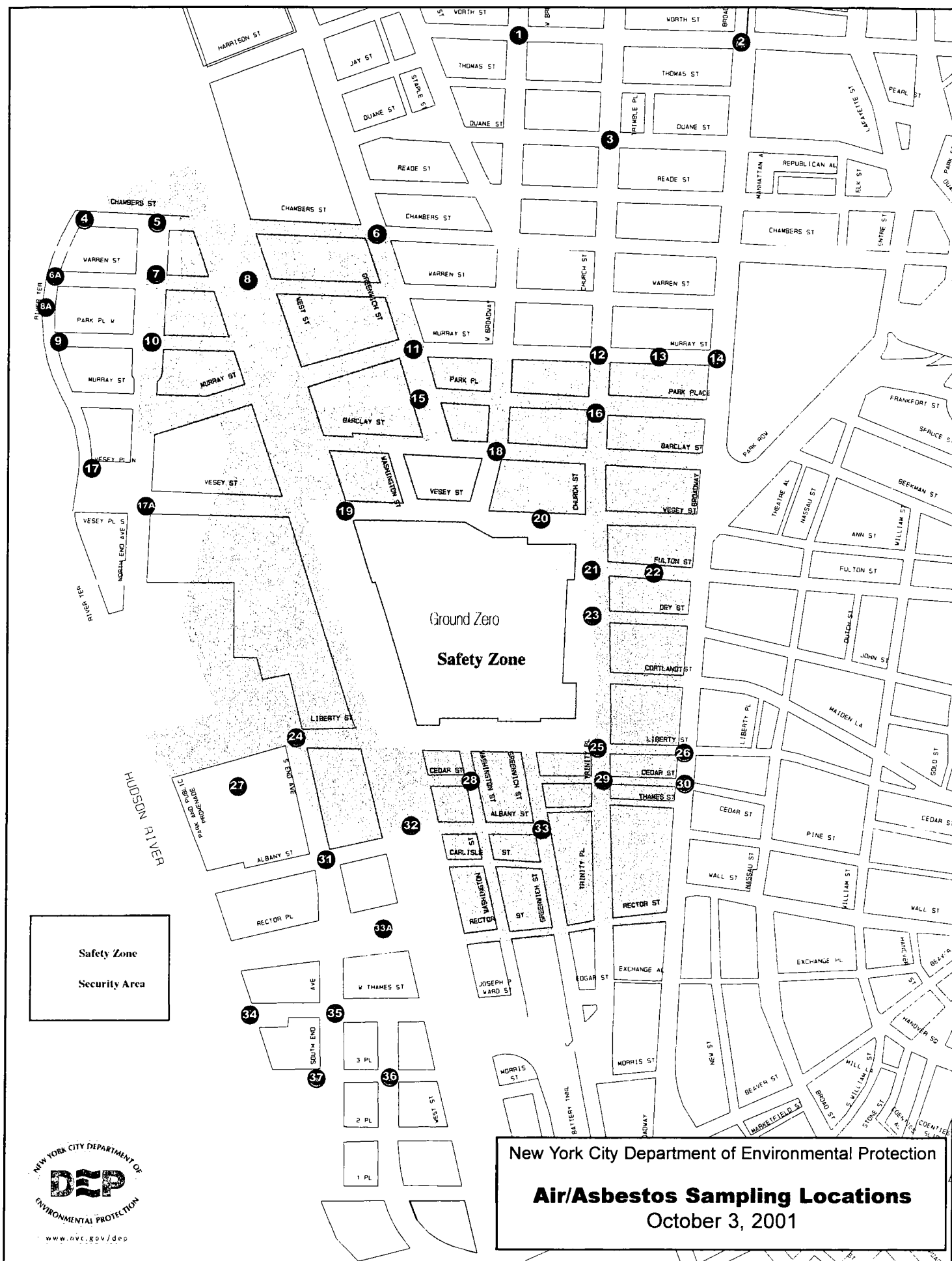
Analysis Performed By:

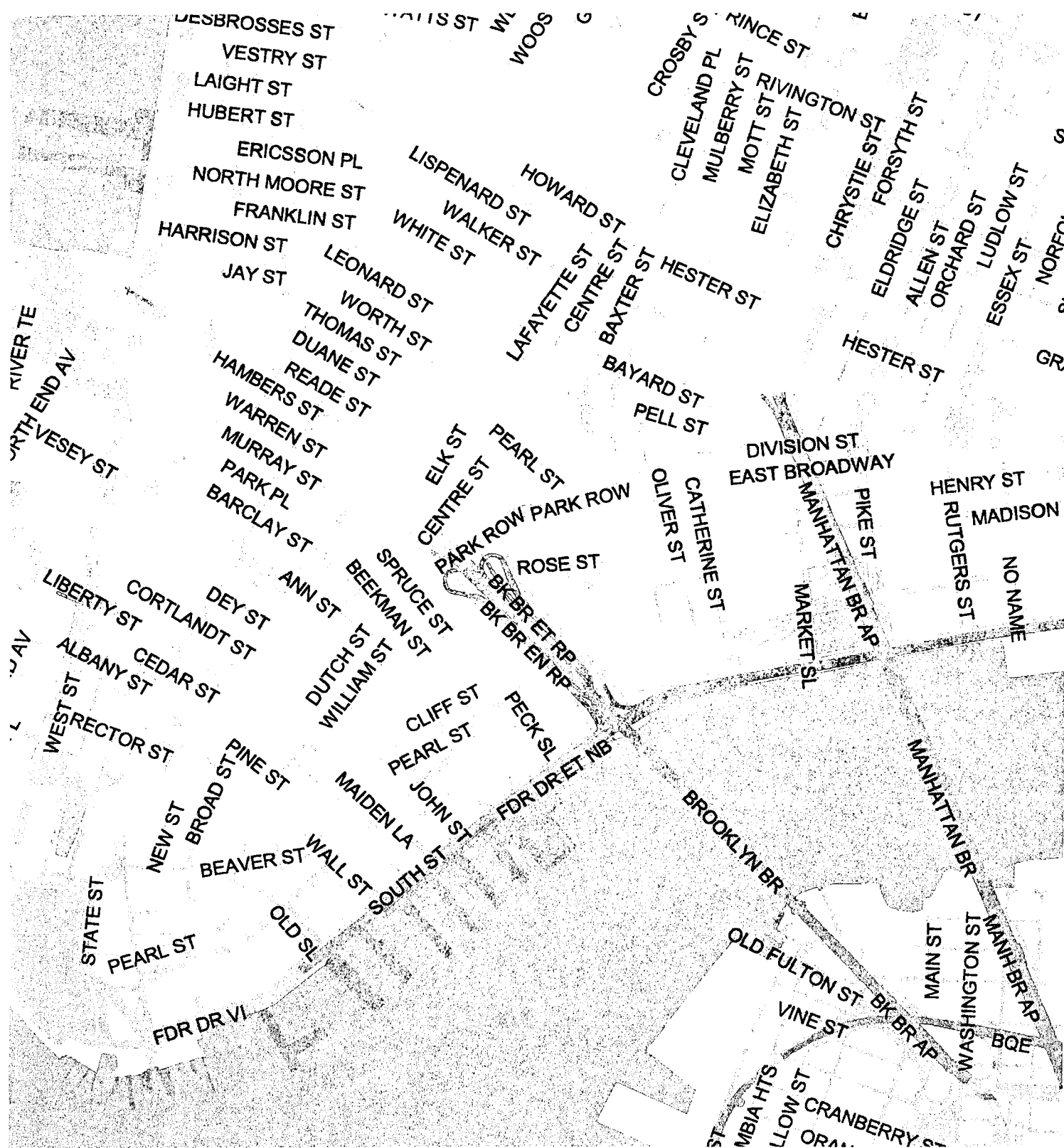
Marek Pawlik
Marek Pawlik
Laboratory Director

Fax: 718-595-3868

APR 4 '02 16:22
5711

P.01





Air/Asbestos Sampling Data (10/3/01)

Location # Date PCM (f/cc)

1	9/12	0.01
2	9/12	0.01
3	9/15-9/16	<.0043-0.0089
4	9/19	0.012
	9/20	<LOQ
	9/21	<LOQ
	9/22	0.009
	9/23	<LOQ
	9/24	0.008
	9/25	0.007
	9/26	0.017
	9/27	0.014
	9/29	0.007
	9/30	<LOQ
	10/1	0.007
	10/2	0.007
	10/3	<LOQ
5	9/21	<LOQ
6	9/12	0.08
6A	9/17	0.007
	9/25	0.007
	10/1	0.007
	10/2	0.007
7	9/18	0.008
	9/19	<LOQ
	9/20	<LOQ
	9/21	<LOQ
	9/22	0.009
	9/23	<LOQ
	9/24	<LOQ
	9/25	0.008
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.009
	9/30	<LOQ
	10/1	0.007
	10/2	0.009
	10/3	0.010
8	9/19	0.03
	9/21	0.01
	9/22	<0.01
	9/23	<LOQ
	9/24	0.009
	9/25	0.012
	9/26	<LOQ
	9/27	0.009
	9/29	0.008
	9/30	<LOQ
	10/1	0.009
	10/2	0.009
	10/3	<LOQ
8A	9/23	<LOQ
	9/27	<LOQ
	9/30	<LOQ
	10/3	<LOQ
9	9/19	<LOQ
	9/20	<LOQ
	9/21	<LOQ
	9/22	<LOQ
	9/23	<LOQ
	9/24	0.007
	9/25	0.008
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.007
	9/30	<LOQ
	10/1	0.008
	10/2	0.007
	10/3	<LOQ
10	9/19	0.05
	9/20	<LOQ
	9/21	<LOQ
	9/22	<LOQ
	9/23	<LOQ
	9/24	0.012
	9/25	0.008
	9/27	<LOQ
	10/1	0.007
	10/2	0.009
	10/3	<LOQ

Location #	Date	PCM (f/cc)
11	9/13	<LOQ
	9/14	<LOQ
	9/15	0.031
	9/16	0.013
	9/17	0.012
	9/18	0.011
	9/19	<LOQ
	9/20	<LOQ
	9/21	<LOQ
	9/22	<0.01
	9/23	<LOQ
	9/24	0.009
	9/25	0.007
	9/26	0.008
	9/27	<LOQ
	9/28	<0.009
	9/29	0.009
	9/30	<LOQ
	10/1	0.009
	10/2	0.008
	10/3	0.021
12	9/13	0.22
	9/14	<LOQ
	9/15	0.022
	9/16	0.03
	9/17	0.013
	9/18	0.018
	9/19	0.014
	9/20	<LOQ
	9/21	<LOQ
	9/22	0.01
	9/23	<LOQ
	9/24	0.017
	9/25	0.007
	9/26	0.01
	9/27	0.016
	9/28	<0.009
	9/29	0.041
	9/30	0.042
	10/1	0.009
	10/2	0.007
	10/3	<LOQ
13	9/14	0.002
	9/15	0.024
	9/16	0.05
	9/17	0.002
14	9/15	0.045
	9/16	0.045
15	9/14	0.009
	9/15	0.076
	9/23	0.014
	9/24	0.012
	9/25	0.009
	9/26	0.011
	9/27	0.014
	9/28	<0.009
	9/29	0.009
	9/30	0.009
	10/1	0.009
	10/2	0.008
	10/3	<LOQ
16	9/23	0.01
	9/24	0.007
	9/25	0.009
	9/26	0.008
	9/27	0.05
	9/28	<0.009
	9/29	0.009
	9/30	0.024
	10/1	0.009
	10/2	0.007
	10/3	<LOQ
17	9/19	0.012
	9/21	<LOQ
	9/22	<LOQ
	9/23	<LOQ
	9/24	<0.007
	9/25	0.008
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.007
	9/30	<LOQ
	10/1	0.009
	10/2	0.009
	10/3	<LOQ
17A	9/19	0.01
18	9/15	<.0046

Location #	Date	PCM (f/cc)
19	9/15	0.0085
	9/18	0.034
	9/27	0.018
	9/27	0.016
20	9/16	0.035
	9/17	0.024
21	9/13	0.1
	9/14	0.007
	9/15	0.034
	9/16	0.03
	9/17	0.017
	9/18	0.027
	9/19	0.02
	9/20	<LOQ
	9/21	0.008
	9/22	0.008
	9/23	0.026
	9/25	0.008
	9/26	0.078
	9/27	0.01
	9/29	0.015
	9/30	0.011
	10/1	0.035
	10/2	0.019
	10/3	0.023
22	9/14	<LOQ
	9/15	0.035
	9/16	0.03
23	9/15	0.007
24	9/15	0.019Z
25	9/14	0.02
	9/18	0.021
26	9/15	0.008
	9/16	0.01
	9/17	0.062
27	9/20	<LOQ
	9/21	0.014
	9/22	0.01
	9/23	<LOQ
	9/24	<0.011
	9/25	0.008
	9/26	0.023
	9/27	<LOQ
	9/29	0.02
	9/30	<LOQ
	10/1	0.009
	10/2	0.009
	10/3	0.010
28	9/13	<LOQ
29	9/14	0.027
	9/20	<LOQ
	9/25	0.008
	9/27	<LOQ
	9/29	0.058
	9/30	0.076
	10/1	0.015
	10/2	0.016
	10/3	0.020
30	9/15	0.033
	9/16	0.03
31	9/19	0.013
	9/21	<LOQ
	9/22	<LOQ
	9/23	<LOQ
	9/24	0.01
	9/25	0.007
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.02
	9/30	0.031
	10/1	0.009
	10/2	0.008
	10/3	<LOQ
32	9/21	0.011
	9/22	0.01
	9/23	<LOQ
	9/24	0.01
	9/25	0.008
	9/26	0.014
	9/27	<LOQ
	9/29	0.08
	9/30	0.022
	10/1	0.012
	10/2	0.009
	10/3	<LOQ
33	9/15	0.0043

Location #	Date	PCM (f/cc)
33A	9/20	<LOQ
	9/21	<LOQ
	9/22	<LOQ
	9/23	0.029
	9/24	0.039
	9/25	0.007
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.009
	9/30	0.02
	10/1	0.009
	10/2	0.008
	10/3	<LOQ
34	9/19	<LOQ
	9/21	<LOQ
	9/22	<0.008
	9/23	<LOQ
	9/24	<0.008
	9/25	0.007
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.013
	9/30	0.009
	10/1	0.009
	10/2	0.009
	10/3	0.011
35	9/20	0.01
	9/29	0.008
36	9/19	<LOQ
	9/20	<LOQ
	9/21	0.009
37	9/23	<LOQ
	9/24	<0.008
	9/25	0.007
	9/26	<LOQ
	9/27	<LOQ
	9/29	0.015
	9/30	0.015
	10/1	0.008
	10/3	<LOQ

NYC DEP is monitoring the ambient outdoor air for asbestos. There is currently no outdoor ambient standard for asbestos. The U.S. and NYC standard for asbestos in community and residential buildings is 0.01 fibers/cubic centimeter (f/cc) in indoor air. DEP is augmenting asbestos sampling being done by USEPA and other state and city agencies.

Results indicate that, as expected, asbestos is present in some of the debris at the site and in areas very close to the site. As of September 28, 2001, most air sampling results outside the security zone were below the standards for asbestos in indoor air.

As testing continues, there may be the possibility of occasional short-term increases in levels of asbestos in the air above the residential standard of 0.01 fibers per cubic centimeter of air. When the measured level for the outdoor ambient air is above .01 f/cc, the samples are being further analyzed to determine how many of the fibers are actually asbestos fibers.

LOQ= Limit of Quantification

Air near Ground Zero is rated safe by feds

24
of Daily News

By PAUL H.B. SHIN
DAILY NEWS STAFF WRITER

The levels of cancer-causing asbestos and other material still lingering in the air in lower Manhattan remain below limits considered a health risk, federal authorities said yesterday.

But with hundreds of tons of hazardous material still buried among the rubble of the World Trade Center, experts cautioned workers at Ground Zero to keep wearing respirators.

Air quality samples taken between Sept. 13-27 at the rubble pile's so-called hot zone detected airborne asbestos and fiberglass at levels that at one point topped .1 fibers per cubic centimeter — the safety limit set by the federal Occupational Safety and Health Administration.

But 90%-95% of those fibers were found to be fiberglass and not asbestos. And samples taken outside the hot zone have shown levels that OSHA considers well below permissible levels of exposure.

The Environmental Protection Agency, which also is keeping tabs on air quality, released re-

sults of its own monitoring last week. Using methods different from OSHA, the EPA said asbestos levels at times spiked to nearly twice the permissible limit, but overall, cancer-causing asbestos found in the air and dust at Ground Zero and surrounding areas were mostly at low levels.

Can scar lungs

With prolonged exposure, asbestos fibers can scar lung tissue and eventually cause cancer. Though a few weeks is not considered enough to cause scarring, health experts warned that the government limits do not necessarily mean it is risk free.

"It's okay legally, but it's not necessarily okay medically because there's no known safe level of exposure to asbestos," said David Newman, an industri-

al hygienist for the New York Committee for Occupational Safety and Health. The committee has been conducting independent tests on behalf of union members working near Ground Zero.

And asbestos is not the only hazard, he said.

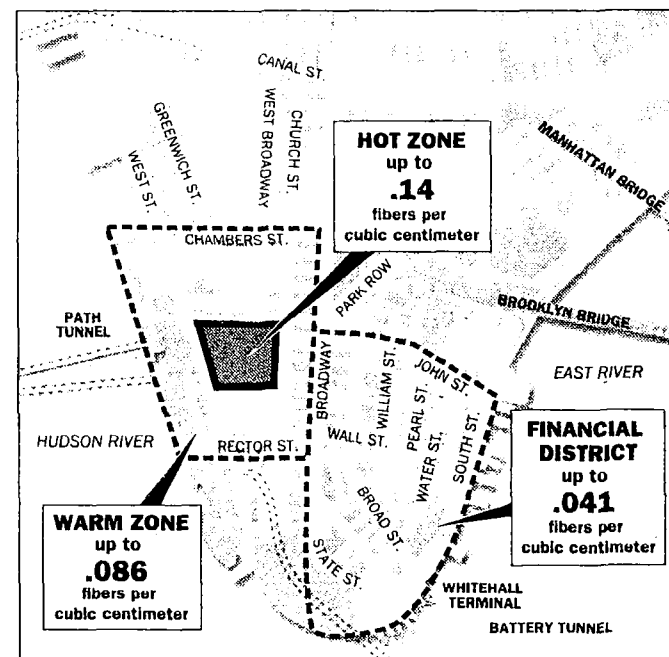
"Even in the absence of toxic components, the dust poses respiratory hazards, particularly to people with pre-existing respiratory conditions such as asthma or bronchitis," Newman said.

Meanwhile, the EPA conducted a whirlwind cleanup of Washington Market Park at Chambers and Greenwich Sts. after a local community group conducted asbestos testing and found levels at times twice the permissible limit. The EPA hauled away all the sand in the playground and even some top soil from surrounding area, said Parks Commissioner Henry Stern.

"It's more as a precaution that the sand was removed," Stern said. "When something like this happens, you want people to be comfortable."

BY THE NUMBERS

The Occupational Safety and Health Administration has set an exposure limit for asbestos at .1 fibers per cubic centimeter during any eight-hour period. The following measurements were taken from Sept. 13 to 27:



Hot Zone (rubble pile)
OSHA took 72 samples in the hot zone. 90% to 95% of the fibers found were fiberglass rather than asbestos.

Warm Zone
OSHA has collected more than 150 samples in the Warm Zone through Sept. 24.

Financial District
OSHA has taken about 40 samples. It ceased sampling in the Financial District on Sept. 21.